



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

Reporting Week	Dec 30 th to Jan 5 th , 2025
Report #	41
Page	1 of 7

Eagle Mountain - Woodfibre Gas Pipeline Project

BCER Waste Discharge Permit Weekly Report



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

Reporting Week	Dec 30 th to Jan 5 th , 2025
Report #	41
Page	2 of 7

Contents

Preamble.....	3
Introduction	3
Sampling Methodology.....	3
Summary-BC Rail Site	4
Site Activities	4
Point of Discharge from Water Treatment System Monitoring	4
Exceedances.....	5
Receiving Environment Monitoring.....	5
Receiving Environment Monitoring Details.....	5
Summary-Woodfibre	5
Site Activities	6
Point of Discharge from Water Treatment System Monitoring	6
Receiving Environment Monitoring.....	6
Receiving Environment Monitoring Details.....	7

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

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Page	3 of 7

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.

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Page	4 of 7

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.

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Page	5 of 7

Table 3: Discharge from Water Treatment System Information

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

*Max discharge is 515 m3/day

Exceedances

No exceedances this reporting period.

Receiving Environment Monitoring

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

Table 4: Upstream Monitoring Information

Location	Date of Lab Sample	Real Time Monitored	Results
Squamish River Upstream	2024-12-30	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	2024-12-30	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix B.

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

Receiving Environment Monitoring Details

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

Summary-Woodfibre

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Page	6 of 7

Site Activities

- 7 days of end of pipe sampling conducted between 2024-12-30 to 2025-01-05 for recommencement of tunneling.
- 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	2024-12-30	Yes-Appendix C	426m ³
Woodfibre	2024-12-31	Yes-Appendix C*lab sample day	416m ³
Woodfibre	2025-01-01	Yes-Appendix C	392m ³
Woodfibre	2025-01-02	Yes-Appendix C	393m ³
Woodfibre	2025-01-03	Yes-Appendix C	395m ³
Woodfibre	2025-01-04	Yes-Appendix C	417m ³
Woodfibre	2025-01-05	Yes-Appendix C	410m ³

*Max discharge is 1500m³/day

Exceedances

There were numerical exceedances of Dissolved Copper and Dissolved Zinc during the 7 days of sampling. A separate 3.1 self disclosure report will be submitted to the BCER.

Receiving Environment Monitoring

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

Table 4: Upstream Monitoring Information

Location	Date of Lab Sample	Real Time Monitored	Results
Woodfibre Upstream	2025-01-02	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix D.

Table 5: Downstream Monitoring Information

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Page	7 of 7

	Date of Lab Sample	Real Time Monitored	Results
Woodfibre Downstream	2025-01-02	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix D.

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

Receiving Environment Monitoring Details

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

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix A	A-1

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



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

Reporting Week	Dec 30 th to Jan 5 th , 2025
Report #	41
Appendix A	A-2

BCR Site Batch Sample Analysis

No Discharges



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

Reporting Week	Dec 30 th to Jan 5 th , 2025
Report #	41
Appendix A	A-3

**BCR Site Batch Sample Lab Documentation
No Discharges**



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

Reporting Week	Dec 30 th to Jan 5 th , 2025
Report #	41
Appendix A	A-4

**BCR Site WTP Discharge Field Notes and Logs
No Discharges**

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix B	B-1

Appendix B: BCR Site Receiving Environment Documentation

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix B	B-2

BCR Site Receiving Environment Sample Analysis

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix B	B-3

BCR Site Receiving Environment Lab Documentation



CERTIFICATE OF ANALYSIS

Work Order	: VA24D4481		
Client	: [Redacted]	Laboratory	: [Redacted]
Contact	: [Redacted]	Account Manager	: [Redacted]
Address	: [Redacted]	Address	: [Redacted]
Telephone	: [Redacted]	Telephone	: [Redacted]
Project	: 11964	Date Samples Received	: 30-Dec-2024 16:50
PO	: 11964 - Task 20 - Phase 3C-4C	Date Analysis Commenced	: 31-Dec-2024
C-O-C number	: ----	Issue Date	: 07-Jan-2025 20:12
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>
[Redacted]		Inorganics, Burnaby, British Columbia
[Redacted]		Inorganics, Burnaby, British Columbia
[Redacted]		Metals, Burnaby, British Columbia
[Redacted]		Metals, Burnaby, British Columbia
[Redacted]		Administration, Burnaby, British Columbia
[Redacted]		Metals, 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
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	30-Dec-2024 10:14	30-Dec-2024 09:42	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4481-001	VA24D4481-002	----	----	----	
					Result	Result	----	----	----	
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm	48.000	49.000	----	----	----	
pH, field	----	EF001/VA	0.10	pH units	7.10	7.10	----	----	----	
Temperature, field	----	EF001/VA	0.10	°C	4.40	4.80	----	----	----	
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L	18.3	17.2	----	----	----	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	18.8	18.3	----	----	----	
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	44	38	----	----	----	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	<3.0	----	----	----	
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	16.0	15.3	----	----	----	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0285	0.0302	----	----	----	
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	2.84	2.57	----	----	----	
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	0.159	0.131	----	----	----	
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	0.0031	0.0024	----	----	----	
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	0.241	0.210	----	----	----	
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0296	0.0292	----	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	4.83	4.62	----	----	----	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	1.73	1.70	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	30-Dec-2024 10:14	30-Dec-2024 09:42	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4481-001	VA24D4481-002	----	----	----	----
					Result	Result	----	----	----	----
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	<0.0015	----	----	----	----
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	<0.0015	----	----	----	----
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	<0.0016	----	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0828	0.0959	----	----	----	----
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	0.00897	0.00907	----	----	----	----
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	0.0000112	0.0000128	----	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	6.30	6.13	----	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000016	0.000016	----	----	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010	0.00011	----	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	0.00081	0.00099	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	0.264	0.195	----	----	----	----
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	0.752	0.737	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	30-Dec-2024 10:14	30-Dec-2024 09:42	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4481-001	VA24D4481-002	----	----	----	
					Result	Result	----	----	----	
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.0106	0.00981	----	----	----	
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	0.000582	0.000565	----	----	----	
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	0.623	0.622	----	----	----	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00086	0.00086	----	----	----	
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	5.58	5.21	----	----	----	
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	0.000022	----	----	----	
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	2.91	2.70	----	----	----	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0398	0.0383	----	----	----	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	1.72	1.68	----	----	----	
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	0.00128	0.00174	----	----	----	
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	0.000030	0.000031	----	----	----	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	0.00116	0.00113	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	30-Dec-2024 10:14	30-Dec-2024 09:42	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4481-001	VA24D4481-002	----	----	----	
					Result	Result	----	----	----	
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	0.0034	0.0084	----	----	----	
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0458	0.0449	----	----	----	
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	0.00013	0.00012	----	----	----	
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00777	0.00772	----	----	----	
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	0.0000105	0.0000115	----	----	----	
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	6.06	5.66	----	----	----	
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	0.000015	0.000014	----	----	----	
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	0.00072	0.00070	----	----	----	
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	0.197	0.130	----	----	----	
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	0.768	0.734	----	----	----	
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.0103	0.00852	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	30-Dec-2024 10:14	30-Dec-2024 09:42	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4481-001	VA24D4481-002	----	----	----	
					Result	Result	----	----	----	
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L	<0.0000050	<0.0000050	----	----	----	
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	0.000564	0.000542	----	----	----	
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	0.633	0.603	----	----	----	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00093	0.00091	----	----	----	
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	0.000056	<0.000050	----	----	----	
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	5.43	5.19	----	----	----	
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	2.72	2.59	----	----	----	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0368	0.0367	----	----	----	
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	1.48	1.76	----	----	----	
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	0.00036	----	----	----	
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	0.000029	0.000027	----	----	----	
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L	0.00105	0.00098	----	----	----	
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L	0.0026	0.0038	----	----	----	



Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	30-Dec-2024 10:14	30-Dec-2024 09:42	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4481-001	VA24D4481-002	----	----	----	
					Result	Result	----	----	----	
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	Field	----	----	----	
Dissolved metals filtration location	----	EP421/VA	-	-	Field	Field	----	----	----	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	

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

QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : VA24D4481</p> <p>Client : [REDACTED]</p> <p>Contact : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Project : 11964</p> <p>PO : 11964 - Task 20 - Phase 3C-4C</p> <p>C-O-C number : ----</p> <p>Sampler : ----</p> <p>Site : Water Analysis</p> <p>Quote number : VA23-TRIT100-012_V2</p> <p>No. of samples received : 2</p> <p>No. of samples analysed : 2</p>	<p>Page : 1 of 14</p> <p>Laboratory : [REDACTED]</p> <p>Account Manager : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Date Samples Received : 30-Dec-2024 16:50</p> <p>Issue Date : 07-Jan-2025 20:11</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	
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SQU DS 1	E298	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	03-Jan-2025	28 days	4 days	✔
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SQU US 1	E298	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	03-Jan-2025	28 days	4 days	✔
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SQU DS 1	E235.Br-L	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	31-Dec-2024	28 days	1 days	✔
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SQU US 1	E235.Br-L	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	31-Dec-2024	28 days	1 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE SQU DS 1	E235.Cl	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	31-Dec-2024	28 days	1 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE SQU US 1	E235.Cl	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	31-Dec-2024	28 days	1 days	✔
Anions and Nutrients : Fluoride in Water by IC										
HDPE SQU DS 1	E235.F	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	31-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		
Anions and Nutrients : Fluoride in Water by IC											
HDPE SQU US 1	E235.F	30-Dec-2024	31-Dec-2024	28 days	1 days	✓	31-Dec-2024	28 days	1 days	✓	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE SQU DS 1	E235.NO3-L	30-Dec-2024	31-Dec-2024	3 days	1 days	✓	31-Dec-2024	3 days	1 days	✓	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE SQU US 1	E235.NO3-L	30-Dec-2024	31-Dec-2024	3 days	1 days	✓	31-Dec-2024	3 days	1 days	✓	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE SQU DS 1	E235.NO2-L	30-Dec-2024	31-Dec-2024	3 days	1 days	✓	31-Dec-2024	3 days	1 days	✓	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE SQU US 1	E235.NO2-L	30-Dec-2024	31-Dec-2024	3 days	1 days	✓	31-Dec-2024	3 days	1 days	✓	
Anions and Nutrients : Sulfate in Water by IC											
HDPE SQU DS 1	E235.SO4	30-Dec-2024	31-Dec-2024	28 days	1 days	✓	31-Dec-2024	28 days	1 days	✓	
Anions and Nutrients : Sulfate in Water by IC											
HDPE SQU US 1	E235.SO4	30-Dec-2024	31-Dec-2024	28 days	1 days	✓	31-Dec-2024	28 days	1 days	✓	
Anions and Nutrients : Total Nitrogen by Colourimetry											
Amber glass total (sulfuric acid) SQU DS 1	E366	30-Dec-2024	31-Dec-2024	28 days	1 days	✓	03-Jan-2025	28 days	4 days	✓	
Anions and Nutrients : Total Nitrogen by Colourimetry											
Amber glass total (sulfuric acid) SQU US 1	E366	30-Dec-2024	31-Dec-2024	28 days	1 days	✓	03-Jan-2025	28 days	4 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SQU DS 1	E372-U	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	03-Jan-2025	28 days	4 days	✔
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) SQU US 1	E372-U	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	03-Jan-2025	28 days	4 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) SQU DS 1	E509	30-Dec-2024	07-Jan-2025	28 days	8 days	✔	07-Jan-2025	28 days	8 days	✔
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) SQU US 1	E509	30-Dec-2024	07-Jan-2025	28 days	8 days	✔	07-Jan-2025	28 days	8 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) SQU DS 1	E421	30-Dec-2024	04-Jan-2025	180 days	5 days	✔	06-Jan-2025	180 days	7 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) SQU US 1	E421	30-Dec-2024	04-Jan-2025	180 days	5 days	✔	06-Jan-2025	180 days	7 days	✔
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial dissolved (hydrochloric acid) SQU DS 1	EF001	30-Dec-2024	----	----	----		03-Jan-2025	----	4 days	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial dissolved (hydrochloric acid) SQU US 1	EF001	30-Dec-2024	----	----	----		03-Jan-2025	----	4 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) SQU DS 1	E358-L	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	02-Jan-2025	28 days	3 days	✔



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)											
Amber glass dissolved (sulfuric acid) SQU US 1	E358-L	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	02-Jan-2025	28 days	3 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE SQU DS 1	E290	30-Dec-2024	31-Dec-2024	14 days	1 days	✔	31-Dec-2024	14 days	1 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE SQU US 1	E290	30-Dec-2024	31-Dec-2024	14 days	1 days	✔	31-Dec-2024	14 days	1 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE SQU DS 1	E162	30-Dec-2024	----	----	----		05-Jan-2025	7 days	6 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE SQU US 1	E162	30-Dec-2024	----	----	----		05-Jan-2025	7 days	6 days	✔	
Physical Tests : TSS by Gravimetry											
HDPE SQU DS 1	E160	30-Dec-2024	----	----	----		05-Jan-2025	7 days	6 days	✔	
Physical Tests : TSS by Gravimetry											
HDPE SQU US 1	E160	30-Dec-2024	----	----	----		05-Jan-2025	7 days	6 days	✔	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC											
Opaque HDPE - total (sodium hydroxide) SQU DS 1	E532	30-Dec-2024	----	----	----		02-Jan-2025	28 days	3 days	✔	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC											
Opaque HDPE - total (sodium hydroxide) SQU US 1	E532	30-Dec-2024	----	----	----		02-Jan-2025	28 days	3 days	✔	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Total Metals : Total Mercury in Water by CVAAS											
Glass vial total (hydrochloric acid) SQU DS 1	E508	30-Dec-2024	05-Jan-2025	28 days	6 days	✔	05-Jan-2025	28 days	6 days	✔	
Total Metals : Total Mercury in Water by CVAAS											
Glass vial total (hydrochloric acid) SQU US 1	E508	30-Dec-2024	05-Jan-2025	28 days	6 days	✔	05-Jan-2025	28 days	6 days	✔	
Total Metals : Total Metals in Water by CRC ICPMS											
HDPE total (nitric acid) SQU DS 1	E420	30-Dec-2024	06-Jan-2025	180 days	7 days	✔	07-Jan-2025	180 days	8 days	✔	
Total Metals : Total Metals in Water by CRC ICPMS											
HDPE total (nitric acid) SQU US 1	E420	30-Dec-2024	06-Jan-2025	180 days	7 days	✔	07-Jan-2025	180 days	8 days	✔	
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)											
HDPE total (zinc acetate+sodium hydroxide) SQU DS 1	E395	30-Dec-2024	----	----	----		05-Jan-2025	7 days	6 days	✔	
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)											
HDPE total (zinc acetate+sodium hydroxide) SQU US 1	E395	30-Dec-2024	----	----	----		05-Jan-2025	7 days	6 days	✔	

Legend & Qualifier Definitions

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



Quality Control Parameter Frequency Compliance

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

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

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1826507	1	19	5.2	5.0	✔
Ammonia by Fluorescence	E298	1827248	1	17	5.8	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1826511	1	15	6.6	5.0	✔
Chloride in Water by IC	E235.Cl	1826510	1	19	5.2	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1831078	1	20	5.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1826820	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1827250	1	7	14.2	5.0	✔
Fluoride in Water by IC	E235.F	1826509	1	15	6.6	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1826512	1	19	5.2	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1826513	1	19	5.2	5.0	✔
Sulfate in Water by IC	E235.SO4	1826514	1	19	5.2	5.0	✔
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1827901	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1830117	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1826697	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1827252	1	10	10.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1827247	1	17	5.8	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✔
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✔
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1826507	1	19	5.2	5.0	✔
Ammonia by Fluorescence	E298	1827248	1	17	5.8	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1826511	1	15	6.6	5.0	✔
Chloride in Water by IC	E235.Cl	1826510	1	19	5.2	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1831078	1	20	5.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1826820	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1827250	1	7	14.2	5.0	✔
Fluoride in Water by IC	E235.F	1826509	1	15	6.6	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1826512	1	19	5.2	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1826513	1	19	5.2	5.0	✔
Sulfate in Water by IC	E235.SO4	1826514	1	19	5.2	5.0	✔
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1827901	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1830117	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1826697	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1827252	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
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1827247	1	17	5.8	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✔
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✔
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1826507	1	19	5.2	5.0	✔
Ammonia by Fluorescence	E298	1827248	1	17	5.8	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1826511	1	15	6.6	5.0	✔
Chloride in Water by IC	E235.Cl	1826510	1	19	5.2	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1831078	1	20	5.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1826820	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1827250	1	7	14.2	5.0	✔
Fluoride in Water by IC	E235.F	1826509	1	15	6.6	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1826512	1	19	5.2	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1826513	1	19	5.2	5.0	✔
Sulfate in Water by IC	E235.SO4	1826514	1	19	5.2	5.0	✔
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1827901	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1830117	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1826697	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1827252	1	10	10.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1827247	1	17	5.8	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✔
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✔
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1827248	1	17	5.8	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1826511	1	15	6.6	5.0	✔
Chloride in Water by IC	E235.Cl	1826510	1	19	5.2	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1831078	1	20	5.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1826820	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1827250	1	7	14.2	5.0	✔
Fluoride in Water by IC	E235.F	1826509	1	15	6.6	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1826512	1	19	5.2	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1826513	1	19	5.2	5.0	✔
Sulfate in Water by IC	E235.SO4	1826514	1	19	5.2	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1827901	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1830117	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1826697	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1827252	1	10	10.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1827247	1	17	5.8	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>							
Matrix Spikes (MS) - Continued							
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✔



Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$, 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 ₂ . 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 ₂ S" if reported represent the maximum possible H ₂ S concentration based on the total sulfide concentration in the sample. The H ₂ S calculation converts Total Sulphide as (S ₂ ⁻) and reports it as Total Sulphide as (H ₂ 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 ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. 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 ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ ,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ 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

<p>Work Order : VA24D4481</p> <p>Client : [REDACTED]</p> <p>Contact : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Project : 11964</p> <p>PO : 11964 - Task 20 - Phase 3C-4C</p> <p>C-O-C number : ----</p> <p>Sampler : ----</p> <p>Site : Water Analysis</p> <p>Quote number : VA23-TRIT100-012_V2</p> <p>No. of samples received : 2</p> <p>No. of samples analysed : 2</p>	<p>Page : 1 of 17</p> <p>Laboratory : [REDACTED]</p> <p>Account Manager : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Date Samples Received : 30-Dec-2024 16:50</p> <p>Date Analysis Commenced : 31-Dec-2024</p> <p>Issue Date : 07-Jan-2025 20:11</p>
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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 Inorganics, Burnaby, British Columbia
[REDACTED]	[REDACTED]	Vancouver Inorganics, Burnaby, British Columbia
[REDACTED]	[REDACTED]	Vancouver Metals, Burnaby, British Columbia
[REDACTED]	[REDACTED]	Vancouver Metals, Burnaby, British Columbia
[REDACTED]	[REDACTED]	Vancouver Administration, Burnaby, British Columbia
[REDACTED]	[REDACTED]	Vancouver Metals, Burnaby, British Columbia
[REDACTED]	[REDACTED]	Vancouver Metals, Burnaby, British Columbia

Page : 2 of 17
Work Order : VA24D4481
Client : Triton Environmental Consultants Ltd.
Project : 11964



General Comments

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

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1826507)											
VA24D4486-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	53.6	53.6	0.00%	20%	----
Physical Tests (QC Lot: 1830076)											
VA24D4481-001	SQU US 1	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1830078)											
VA24D4481-001	SQU US 1	Solids, total dissolved [TDS]	----	E162	13	mg/L	44	48	4	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1826509)											
FJ2403917-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.122	0.121	0.001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1826510)											
FJ2403917-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1826511)											
FJ2403917-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1826512)											
FJ2403917-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.488	0.490	0.391%	20%	----
Anions and Nutrients (QC Lot: 1826513)											
FJ2403917-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1826514)											
FJ2403917-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	21.3	21.4	0.606%	20%	----
Anions and Nutrients (QC Lot: 1827247)											
FJ2403911-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0063	0.0059	0.0004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1827248)											
FJ2403911-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1827252)											
FJ2403911-001	Anonymous	Nitrogen, total	7727-37-9	E366	1.50	mg/L	31.8	32.1	0.852%	20%	----
Organic / Inorganic Carbon (QC Lot: 1827250)											
FJ2403914-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.11	1.14	0.03	Diff <2x LOR	----
Total Sulfides (QC Lot: 1830140)											
VA24D4481-001	SQU US 1	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	<0.0015	0	Diff <2x LOR	----
Total Metals (QC Lot: 1826697)											
VA24D4486-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0343	0.0326	5.07%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00992	0.00981	1.17%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1826697) - continued											
VA24D4486-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00389	0.00385	1.00%	20%	---
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0413	0.0409	1.01%	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	0.121	0.119	1.36%	20%	---
		Cadmium, total	7440-43-9	E420	0.000050	mg/L	0.0000165	0.0000176	0.0000011	Diff <2x LOR	---
		Calcium, total	7440-70-2	E420	0.050	mg/L	28.4	27.8	2.33%	20%	---
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.00188	0.00185	1.70%	20%	---
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Iron, total	7439-89-6	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000161	0.000160	0.0000007	Diff <2x LOR	---
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0600	0.0568	5.43%	20%	---
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	2.08	2.05	1.18%	20%	---
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0733	0.0728	0.604%	20%	---
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.0113	0.0112	1.14%	20%	---
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	---
		Potassium, total	7440-09-7	E420	0.050	mg/L	14.8	14.7	0.289%	20%	---
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.0184	0.0182	1.19%	20%	---
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000761	0.000771	1.29%	20%	---
		Silicon, total	7440-21-3	E420	0.10	mg/L	1.78	1.80	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	32.4	33.2	2.56%	20%	---
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.506	0.496	2.08%	20%	---
		Sulfur, total	7704-34-9	E420	0.50	mg/L	25.6	26.1	1.83%	20%	---
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000045	0.000048	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	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	---
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	0.00114	0.00116	1.81%	20%	---
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000441	0.000454	2.76%	20%	---



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1826697) - continued											
VA24D4486-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1830117)											
VA24D4463-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1826820)											
VA24D4424-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0148	0.0143	3.47%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00370	0.00368	0.440%	20%	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00049	0.00052	0.00002	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0650	0.0637	2.06%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.011	0.011	0.0002	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000884	0.0000927	4.78%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	88.7	87.5	1.30%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000026	0.000027	0.0000002	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00057	0.00055	0.00002	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00080	0.00076	0.00004	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	0.013	0.003	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	19.7	19.4	1.43%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0939	0.0916	2.45%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00121	0.00124	2.09%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00335	0.00392	0.00057	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	1.31	1.31	0.0248%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00064	0.00056	0.00008	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000727	0.000766	5.22%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.33	2.32	0.504%	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	3.17	3.31	4.28%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.505	0.502	0.592%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1826820) - continued											
VA24D4424-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	91.9	88.8	3.40%	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	0.000026	0.000027	0.0000009	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	0.000087	0.000088	0.0000004	Diff <2x LOR	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0258	0.0254	1.82%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1831078)											
VA24D4474-003	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1827901)											
VA24D4318-004	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----



Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1826507)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1830076)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1830078)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1826509)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1826510)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1826511)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1826512)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1826513)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1826514)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1827247)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1827248)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1827252)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Organic / Inorganic Carbon (QCLot: 1827250)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1830140)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1826697)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1826697) - continued						
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1830117)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1826820)						
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>
Dissolved Metals (QCLot: 1826820) - continued						
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1831078)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1827901)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----



Laboratory Control Sample (LCS) Report

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

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1826507)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	105	85.0	115	----
Physical Tests (QCLot: 1830076)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	99.7	85.0	115	----
Physical Tests (QCLot: 1830078)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	98.6	85.0	115	----
Anions and Nutrients (QCLot: 1826509)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	99.3	90.0	110	----
Anions and Nutrients (QCLot: 1826510)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1826511)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	108	85.0	115	----
Anions and Nutrients (QCLot: 1826512)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	99.7	90.0	110	----
Anions and Nutrients (QCLot: 1826513)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	98.9	90.0	110	----
Anions and Nutrients (QCLot: 1826514)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1827247)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	100	80.0	120	----
Anions and Nutrients (QCLot: 1827248)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	104	85.0	115	----
Anions and Nutrients (QCLot: 1827252)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	104	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1827250)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	96.0	80.0	120	----
Total Sulfides (QCLot: 1830140)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	105	80.0	120	----
Total Metals (QCLot: 1826697)									



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1826697) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	105	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	110	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	103	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	106	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	96.9	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	106	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	101	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	98.1	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	98.4	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	98.4	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	96.5	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	106	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	103	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.5	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	108	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	96.9	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	108	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	106	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	104	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	117	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	96.9	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	102	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	105	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	95.8	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	106	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	106	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	97.2	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	107	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	98.0	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	102	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	98.9	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1826697) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	99.7	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	100	80.0	120	----
Total Metals (QCLot: 1830117)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	90.2	80.0	120	----
Dissolved Metals (QCLot: 1826820)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	106	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	106	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	106	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	99.7	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	96.6	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	102	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	93.6	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	100	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	98.8	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	95.5	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	99.6	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	99.8	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	97.6	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	94.6	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	104	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	98.5	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	105	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	100	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	100	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	111	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	100	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	103	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	94.1	80.0	120	----
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	94.8	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	98.5	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	102	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1826820) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	107	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	102	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	94.3	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	105	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	96.3	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	106	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	102	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	95.6	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	99.5	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	103	80.0	120	----
Speciated Metals (QCLot: 1827901)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	99.2	80.0	120	----



Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1826509)										
FJ2403917-002	Anonymous	Fluoride	16984-48-8	E235.F	1.04 mg/L	1 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1826510)										
FJ2403917-002	Anonymous	Chloride	16887-00-6	E235.Cl	106 mg/L	100 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1826511)										
FJ2403917-002	Anonymous	Bromide	24959-67-9	E235.Br-L	0.566 mg/L	0.5 mg/L	113	75.0	125	----
Anions and Nutrients (QCLot: 1826512)										
FJ2403917-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	2.64 mg/L	2.5 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1826513)										
FJ2403917-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.525 mg/L	0.5 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1826514)										
FJ2403917-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1827247)										
FJ2403911-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0471 mg/L	0.05 mg/L	94.1	70.0	130	----
Anions and Nutrients (QCLot: 1827248)										
FJ2403911-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.104 mg/L	0.1 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1827252)										
FJ2403911-002	Anonymous	Nitrogen, total	7727-37-9	E366	0.402 mg/L	0.4 mg/L	100	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1827250)										
FJ2403914-003	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.84 mg/L	5 mg/L	96.8	70.0	130	----
Total Sulfides (QCLot: 1830140)										
VA24D4481-002	SQU DS 1	Sulfide, total (as S)	18496-25-8	E395	0.241 mg/L	0.2 mg/L	120	75.0	125	----
Total Metals (QCLot: 1826697)										
VA24D4486-002	Anonymous	Aluminum, total	7429-90-5	E420	0.205 mg/L	0.2 mg/L	102	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0199 mg/L	0.02 mg/L	99.7	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0198 mg/L	0.02 mg/L	99.0	70.0	130	----
		Barium, total	7440-39-3	E420	0.0203 mg/L	0.02 mg/L	102	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0418 mg/L	0.04 mg/L	105	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00932 mg/L	0.01 mg/L	93.2	70.0	130	----
		Boron, total	7440-42-8	E420	0.106 mg/L	0.1 mg/L	106	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00390 mg/L	0.004 mg/L	97.4	70.0	130	----
		Calcium, total	7440-70-2	E420	4.02 mg/L	4 mg/L	100	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0102 mg/L	0.01 mg/L	102	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0397 mg/L	0.04 mg/L	99.2	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
Total Metals (QCLot: 1826697) - continued										
VA24D4486-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Copper, total	7440-50-8	E420	0.0197 mg/L	0.02 mg/L	98.6	70.0	130	----
		Iron, total	7439-89-6	E420	1.95 mg/L	2 mg/L	97.4	70.0	130	----
		Lead, total	7439-92-1	E420	0.0191 mg/L	0.02 mg/L	95.5	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0995 mg/L	0.1 mg/L	99.5	70.0	130	----
		Magnesium, total	7439-95-4	E420	1.01 mg/L	1 mg/L	101	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0196 mg/L	0.02 mg/L	98.2	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0199 mg/L	0.02 mg/L	99.6	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0397 mg/L	0.04 mg/L	99.2	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.93 mg/L	10 mg/L	99.3	70.0	130	----
		Potassium, total	7440-09-7	E420	3.89 mg/L	4 mg/L	97.3	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0418 mg/L	0.04 mg/L	104	70.0	130	----
		Silicon, total	7440-21-3	E420	10.2 mg/L	10 mg/L	102	70.0	130	----
		Silver, total	7440-22-4	E420	0.00396 mg/L	0.004 mg/L	99.0	70.0	130	----
		Sodium, total	7440-23-5	E420	2.07 mg/L	2 mg/L	103	70.0	130	----
		Strontium, total	7440-24-6	E420	0.0194 mg/L	0.02 mg/L	96.9	70.0	130	----
		Sulfur, total	7704-34-9	E420	19.6 mg/L	20 mg/L	98.3	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0406 mg/L	0.04 mg/L	102	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00381 mg/L	0.004 mg/L	95.4	70.0	130	----
		Tin, total	7440-31-5	E420	0.0199 mg/L	0.02 mg/L	99.4	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0379 mg/L	0.04 mg/L	94.7	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0187 mg/L	0.02 mg/L	93.7	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	0.0989 mg/L	0.1 mg/L	98.9	70.0	130	----
		Zinc, total	7440-66-6	E420	0.400 mg/L	0.4 mg/L	99.9	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0388 mg/L	0.04 mg/L	96.9	70.0	130	----
Total Metals (QCLot: 1830117)										
VA24D4467-001	Anonymous	Mercury, total	7439-97-6	E508	ND mg/L	----	ND	70.0	130	----
Dissolved Metals (QCLot: 1826820)										
VA24D4467-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.968 mg/L	1 mg/L	96.8	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0992 mg/L	0.1 mg/L	99.2	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.103 mg/L	0.1 mg/L	103	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.188 mg/L	0.2 mg/L	94.3	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0476 mg/L	0.05 mg/L	95.2	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.436 mg/L	0.5 mg/L	87.2	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.0194 mg/L	0.02 mg/L	96.9	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0466 mg/L	0.05 mg/L	93.3	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.188 mg/L	0.2 mg/L	94.2	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	ND mg/L	----	ND	70.0	130	----
		Copper, dissolved	7440-50-8	E421	ND mg/L	----	ND	70.0	130	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1826820) - continued										
VA24D4467-001	Anonymous	Iron, dissolved	7439-89-6	E421	9.42 mg/L	10 mg/L	94.2	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0950 mg/L	0.1 mg/L	95.0	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.484 mg/L	0.5 mg/L	96.9	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	0.0983 mg/L	0.1 mg/L	98.3	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	ND mg/L	----	ND	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	52.9 mg/L	50 mg/L	106	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	18.7 mg/L	20 mg/L	93.3	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.185 mg/L	0.2 mg/L	92.7	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	48.7 mg/L	50 mg/L	97.3	70.0	130	----
		Silver, dissolved	7440-22-4	E421	ND mg/L	----	ND	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	0.210 mg/L	0.2 mg/L	105	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0189 mg/L	0.02 mg/L	94.4	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0934 mg/L	0.1 mg/L	93.4	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.194 mg/L	0.2 mg/L	97.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0997 mg/L	0.1 mg/L	99.7	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.489 mg/L	0.5 mg/L	97.9	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	1.87 mg/L	2 mg/L	93.3	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.201 mg/L	0.2 mg/L	101	70.0	130	----
Dissolved Metals (QCLot: 1831078)										
VA24D4474-004	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000970 mg/L	0 mg/L	97.0	70.0	130	----
Speciated Metals (QCLot: 1827901)										
VA24D4481-001	SQU US 1	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.254 mg/L	0.25 mg/L	102	70.0	130	----

Affix ALS barcode label here
(lab use only)

Report To Contact and company name below will appear on the final report	Report Format / Distribution Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Quality Control (QC) Report with Report <input checked="" type="checkbox"/> <input type="checkbox"/> NO <input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply) Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply EMERGENCY 4 day [P4-20%] <input type="checkbox"/> 3 day [P3-25%] <input type="checkbox"/> 2 day [P2-50%] <input type="checkbox"/> 1 Business day [E1 - 100%] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 - 200% (Laboratory opening fees may apply)] <input type="checkbox"/>
Company: Contact: Phone: Street: City/Province: Postal Code:	Email 1 or Fax Email 2 Email 3	Date and Time Required for all E&P TATs: 07 Dec 2014 12:25
Invoice To Same as Report To <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
Invoice Distribution Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		
Project Information ALS Account # / Quote #: VA23-TRIT100-012 Job #: 11964 PO / AFE: 11964 - Task 20 - Phase 3C-4C LSD:		
ALS Lab Work Order # (lab use only): <u>0119</u>		
Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below		

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Total metals + mercury	Dissolved metals + mercury	Total hexavalent chromium	Total trivalent chromium	TSS	TDS	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)	Total sulfide (low) (as H ₂ S)	Un-ionized Sulfide (low)	Anions scan (Br, Cl, F, NO ₂ , NO ₃ , SO ₄)	General parameters (alkalinity)	DOC	F	P	F/P	SAMPLES ON HOLD	Sample is hazardous (please provide further details)	NUMBER OF CONTAINERS
SQU US 1				Water	R	R	R	R	R	R	R	R	R	R	R	R					N	9
	pH: 7.1 cond: 48 μ S/cm temp: 4.4°C	30-DEC-24	10:14																		N	9
SQU DS 1				Water	R	R	R	R	R	R	R	R	R	R	R	R					N	9
	pH: 7.1 cond: 49 μ S/cm temp: 4.8°C	30-DEC-24	9:42																		N	9

Environmental Division
Vancouver
Work Order Reference
VA24D4481



Telephone : +1 604 263 4188

Drinking Water (DW) Samples¹ (client use)	Special Instructions / Specify Criteria to add (electr)	SAMPLE CONDITION AS RECEIVED (lab use only)	
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Frozen <input type="checkbox"/> Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input type="checkbox"/> Cooling Initiated <input type="checkbox"/>	SIF Observations Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Are samples for human consumption/ use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Triton Project # 11964	INITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C 5	
INITIAL SHIPMENT RECEPTION (lab use only)		FINAL SHIPMENT RECEPTION (lab use only)	
Time Received by: 16:47	Date:	Time Received by: <u>AW</u>	Date: Dec 30 11:50 AM

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix B	B-4

BCR Site Receiving Environment Field Notes and Logs



FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2024-12-30-Chycoski-D3F85

Project Component:	Tunnel	Site Name:	Receiving Environment - Downstream of Discharge
Inspection Date:	12/30/2024	Location:	BC Rail Site
Triton QP:	Lily Chycoski	Latitude/Longitude:	49.724511 -123.162179
Temperature(c): Low 0 High 4		Permit:	AE 111824
Weather Conditions:	Light Rain	Ground Conditions:	Wet

Observations

Time: 09:42:00 **Flow Volume (visual):** moderate

Notes:

Odour Detected?: No **Notes:**

Unusual Colour?: No **Notes:**

Unusual Observations?: No **Notes:**

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

Samples Collected - Parameters

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

Logger Maintenance

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

Describe Logger Maintenance

Cleaned sonde and calibrated turbidity.

Photos



Photo: 1
Location: SQU DS 1
Description: DS view



Photo: 2
Location: SQU DS 1
Description: Across view

Photos



Photo: 3
Location: SQU DS 1
Description: US view

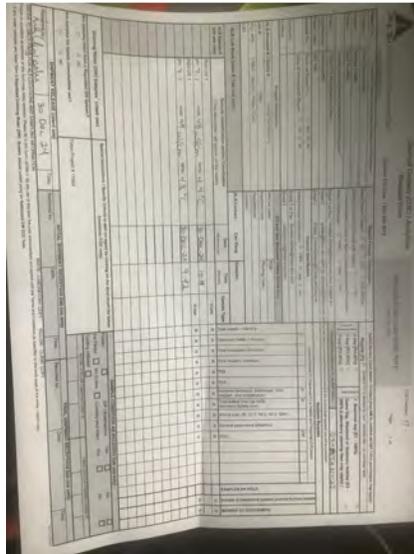


Photo: 4
Location: SQU DS 1
Description: Lab COC



2024-12-30-Chycoski-D3F85

Sign Off

Report Prepared By: Lily Chycoski

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

2024-12-30-Chycoski-4A724

Project Component:	Tunnel	Site Name:	Receiving Environment - Upstream of Discharge
Inspection Date:	12/30/2024	Location:	BC Rail Site
Triton QP:	Lily Chycoski	Latitude/Longitude:	49.726866 -123.163912
Temperature(c): Low 0 High 4		Permit:	AE 111824
Weather Conditions:	Light Rain	Ground Conditions:	Wet

Observations

Time: 10:14:00 **Flow Volume (visual):** moderate

Notes:

Odour Detected?: No **Notes:**

Unusual Colour?: No **Notes:**

Unusual Observations?: No **Notes:**

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

Samples Collected - Parameters

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

Logger Maintenance

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

Describe Logger Maintenance

Cleaned sonde and calibrated turbidity.

Photos



Photo: 1
Location: SQU US 1
Description: US view



Photo: 2
Location: SQU US 1
Description: Across view

Photos



Photo: 3
Location: SQU US 1
Description: DS view

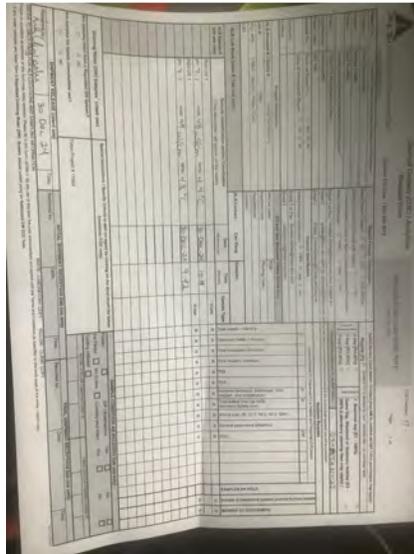


Photo: 4
Location: SQU US 1
Description: Lab COC



2024-12-30-Chycoski-4A724

Sign Off

Report Prepared By: Lily Chycoski

Report Reviewed: Yes

Report Reviewer:

Professional(s) of Record:

Name:

Designation:

Designation Number:

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix C	C-1

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

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix C	C-2

Woodfibre Site Sample Analysis



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

Reporting Week	Dec 30 th to Jan 5 th , 2025
Report #	41
Appendix C	C-3

Woodfibre Site Sample Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	: VA24D4482		
Client	: [REDACTED]	Laboratory	: [REDACTED]
Contact	: [REDACTED]	Account Manager	: [REDACTED]
Address	: [REDACTED]	Address	: [REDACTED]
Telephone	: [REDACTED]	Telephone	: [REDACTED]
Project	: 11964	Date Samples Received	: 30-Dec-2024 16:50
PO	: 11964 - Task 40 - Phase 3C-4C	Date Analysis Commenced	: 31-Dec-2024
C-O-C number	: [REDACTED]	Issue Date	: 07-Jan-2025 17:05
Sampler	: [REDACTED]		
Site	: Water Analysis		
Quote number	: VA23-TRIT100-012		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
[REDACTED]		Metals, Burnaby, British Columbia
[REDACTED]		Organics, Burnaby, British Columbia
[REDACTED]		Inorganics, Burnaby, British Columbia
[REDACTED]		Metals, Burnaby, British Columbia
[REDACTED]		Administration, Burnaby, British Columbia
[REDACTED]		Metals, 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
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	30-Dec-2024 13:26	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4482-001	---	---	---	---	
					Result	---	---	---	---	
Field Tests										
Conductivity, field	---	EF001/VA	0.10	µS/cm	136.00	---	---	---	---	
pH, field	---	EF001/VA	0.10	pH units	7.81	---	---	---	---	
Temperature, field	---	EF001/VA	0.10	°C	9.50	---	---	---	---	
Physical Tests										
Hardness (as CaCO3), dissolved	---	EC100/VA	0.60	mg/L	50.5	---	---	---	---	
Hardness (as CaCO3), from total Ca/Mg	---	EC100A/VA	0.60	mg/L	55.5	---	---	---	---	
Solids, total dissolved [TDS]	---	E162/VA	10	mg/L	81	---	---	---	---	
Solids, total suspended [TSS]	---	E160/VA	3.0	mg/L	<3.0	---	---	---	---	
Alkalinity, total (as CaCO3)	---	E290/VA	2.0	mg/L	62.2	---	---	---	---	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0094	---	---	---	---	
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	0.93	---	---	---	---	
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.190	---	---	---	---	
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.0215	---	---	---	---	
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	0.0011	---	---	---	---	
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	4.29	---	---	---	---	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	---	E358-L/VA	0.50	mg/L	<0.50	---	---	---	---	
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	---	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	30-Dec-2024 13:26	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4482-001	----	----	----	----	----
						Result	----	----	----	----
Total Sulfides										
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	----	----	----	----	----
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	----	----	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0096	----	----	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00218	----	----	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00277	----	----	----	----	----
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	0.012	----	----	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	0.0000065 ^{DLM}	----	----	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	20.6	----	----	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000011	----	----	----	----	----
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	0.00260	----	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	0.013	----	----	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000466	----	----	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0021	----	----	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	0.992	----	----	----	----	----
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00106	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	---	---	---	---
					Client sampling date / time	30-Dec-2024 13:26	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4482-001	---	---	---	---	
					Result	---	---	---	---	
Total Metals										
Mercury, total	7439-97-6	E508/VA	0.000050	mg/L	<0.000050	---	---	---	---	
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.0166	---	---	---	---	
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	0.812	---	---	---	---	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00123	---	---	---	---	
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	0.000061	---	---	---	---	
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	6.63	---	---	---	---	
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	---	---	---	---	
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	3.24	---	---	---	---	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0393	---	---	---	---	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	1.53	---	---	---	---	
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	0.00030	---	---	---	---	
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.00866	---	---	---	---	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	---	---	---	---	
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	0.0194	---	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	30-Dec-2024 13:26	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4482-001	----	----	----	----	----
						Result	----	----	----	----
Total Metals										
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0058	----	----	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	0.00214	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00275	----	----	----	----	----
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	<0.0000100 ^{DLM}	----	----	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	18.7	----	----	----	----	----
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	0.00187	----	----	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	<0.010	----	----	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	0.000330	----	----	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	0.0020	----	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	0.936	----	----	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00096	----	----	----	----	----
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L	<0.0000050	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	---	---	---	---
					Client sampling date / time	30-Dec-2024 13:26	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4482-001	---	---	---	---	
						Result	---	---	---	---
Dissolved Metals										
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	0.0162	---	---	---	---	
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	0.748	---	---	---	---	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00115	---	---	---	---	
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	<0.000050	---	---	---	---	
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	5.99	---	---	---	---	
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000010	---	---	---	---	
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	3.12	---	---	---	---	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0379	---	---	---	---	
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	1.29	---	---	---	---	
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	0.00030	---	---	---	---	
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L	0.00860	---	---	---	---	
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L	<0.00050	---	---	---	---	
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L	0.0197	---	---	---	---	
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	<0.00020	---	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	30-Dec-2024 13:26	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4482-001	----	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	----	----	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-	Field	----	----	----	----	----
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	----	----	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	----	----	----	----	----
Volatile Organic Compounds										
Chlorobenzene	108-90-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Chloromethane	74-87-3	E611C/VA	5.0	µg/L	<5.0	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611C/VA	0.75	µg/L	<0.75	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C/VA	0.20	µg/L	<0.20	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Trichlorofluoromethane	75-69-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Volatile Organic Compounds [Drycleaning]										
Carbon tetrachloride	56-23-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Chloroethane	75-00-3	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	30-Dec-2024 13:26	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4482-001	----	----	----	----	
						Result	----	----	----	----
Volatile Organic Compounds [Drycleaning]										
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	----	----	----	----	
Volatile Organic Compounds [Fuels]										
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	----	----	----	----	
Toluene	108-88-3	E611CVA	0.40	µg/L	<0.40	----	----	----	----	
Xylene, m+p-	179601-23-1	E611CVA	0.40	µg/L	<0.40	----	----	----	----	
Xylene, o-	95-47-6	E611CVA	0.30	µg/L	<0.30	----	----	----	----	
Xylenes, total	1330-20-7	E611CVA	0.50	µg/L	<0.50	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	30-Dec-2024 13:26	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4482-001	----	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds [THMs]										
Bromodichloromethane	75-27-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Bromoform	75-25-2	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Chloroform	67-66-3	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dibromochloromethane	124-48-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Hydrocarbons										
EPH (C10-C19)	----	E601A/VA	250	µg/L	<250	----	----	----	----	----
EPH (C19-C32)	----	E601A/VA	250	µg/L	<250	----	----	----	----	----
VHw (C6-C10)	----	E581.VH+F1/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	----	----	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%	77.0	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/V A	1.0	%	97.6	----	----	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%	85.7	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611C/VA	1.0	%	101	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Acridine	260-94-6	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	---	---	---	---
					Client sampling date / time	30-Dec-2024 13:26	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4482-001	---	---	---	---	---
						Result	---	---	---	---
Polycyclic Aromatic Hydrocarbons										
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	---	---	---	---	---
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	---	---	---	---	---
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	---	---	---	---	---
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	69.5	---	---	---	---	---
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	78.5	---	---	---	---	---



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	30-Dec-2024 13:26	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D4482-001	----	----	----	----	----
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	82.7	----	----	----	----	----
Glycols										
Diethylene glycol	111-46-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Ethylene glycol	107-21-1	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Propylene glycol, 1,2-	57-55-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Triethylene glycol	112-27-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Glycols, total (EG+DEG+PG)	----	E680E/VA	10	mg/L	<10	----	----	----	----	----
Glycols Surrogates										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%	95.2	----	----	----	----	----

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

QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : VA24D4482</p> <p>Client : [REDACTED]</p> <p>Contact : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Project : 11964</p> <p>PO : 11964 - Task 40 - Phase 3C-4C</p> <p>C-O-C number : ----</p> <p>Sampler : ----</p> <p>Site : Water Analysis</p> <p>Quote number : VA23-TRIT100-012_V2</p> <p>No. of samples received : 1</p> <p>No. of samples analysed : 1</p>	<p>Page : 1 of 14</p> <p>Laboratory : [REDACTED]</p> <p>Account Manager : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Date Samples Received : 30-Dec-2024 16:50</p> <p>Issue Date : 07-Jan-2025 17:04</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
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Total Metals	Anonymous	Anonymous	Thorium, total	7440-29-1	E420	62.7 % ^{MES}	70.0-130%	Recovery less than lower data quality objective

Result Qualifiers

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



Analysis Holding Time Compliance

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

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

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

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

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) WLNG EOP	E298	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	02-Jan-2025	28 days	3 days	✔	
Anions and Nutrients : Bromide in Water by IC (Low Level)											
HDPE WLNG EOP	E235.Br-L	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	31-Dec-2024	28 days	1 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE WLNG EOP	E235.Cl	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	31-Dec-2024	28 days	1 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE WLNG EOP	E235.F	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	31-Dec-2024	28 days	1 days	✔	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO3-L	30-Dec-2024	31-Dec-2024	3 days	1 days	✔	31-Dec-2024	3 days	1 days	✔	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO2-L	30-Dec-2024	31-Dec-2024	3 days	1 days	✔	31-Dec-2024	3 days	1 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE WLNG EOP	E235.SO4	30-Dec-2024	31-Dec-2024	28 days	1 days	✔	31-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		
Dissolved Metals : Dissolved Mercury in Water by CVAAS											
Glass vial dissolved (hydrochloric acid) WLNG EOP	E509	30-Dec-2024	07-Jan-2025	28 days	8 days	✓	07-Jan-2025	28 days	8 days	✓	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) WLNG EOP	E421	30-Dec-2024	03-Jan-2025	180 days	4 days	✓	04-Jan-2025	180 days	5 days	✓	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine											
Glass vial dissolved (hydrochloric acid) WLNG EOP	EF001	30-Dec-2024	----	----	----		03-Jan-2025	----	4 days		
Glycols : Glycols (4 analytes) by GC-FID											
Glass vial WLNG EOP	E680E	30-Dec-2024	31-Dec-2024	7 days	1 days	✓	02-Jan-2025	40 days	2 days	✓	
Hydrocarbons : BC PHCs - EPH by GC-FID											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E601A	30-Dec-2024	07-Jan-2025	14 days	7 days	✓	07-Jan-2025	40 days	0 days	✓	
Hydrocarbons : VH and F1 by Headspace GC-FID											
Glass vial (sodium bisulfate) WLNG EOP	E581.VH+F1	30-Dec-2024	03-Jan-2025	14 days	4 days	✓	03-Jan-2025	14 days	4 days	✓	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)											
Amber glass dissolved (sulfuric acid) WLNG EOP	E358-L	30-Dec-2024	31-Dec-2024	28 days	1 days	✓	31-Dec-2024	28 days	1 days	✓	
Physical Tests : Alkalinity Species by Titration											
HDPE WLNG EOP	E290	30-Dec-2024	31-Dec-2024	14 days	1 days	✓	31-Dec-2024	14 days	1 days	✓	
Physical Tests : TDS by Gravimetry											
HDPE WLNG EOP	E162	30-Dec-2024	----	----	----		05-Jan-2025	7 days	6 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry										
HDPE WLNG EOP	E160	30-Dec-2024	----	----	----		05-Jan-2025	7 days	6 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	30-Dec-2024	07-Jan-2025	14 days	7 days	✓	07-Jan-2025	40 days	0 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	30-Dec-2024	----	----	----		02-Jan-2025	28 days	3 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG EOP	E508	30-Dec-2024	05-Jan-2025	28 days	6 days	✓	05-Jan-2025	28 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG EOP	E420	30-Dec-2024	06-Jan-2025	180 days	7 days	✓	07-Jan-2025	180 days	8 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	30-Dec-2024	----	----	----		05-Jan-2025	7 days	6 days	✓
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate) WLNG EOP	E611C	30-Dec-2024	03-Jan-2025	14 days	4 days	✓	03-Jan-2025	14 days	4 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	
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1826507	1	19	5.2	5.0	✓
Ammonia by Fluorescence	E298	1826567	1	4	25.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1826511	1	15	6.6	5.0	✓
Chloride in Water by IC	E235.Cl	1826510	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1831078	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1826814	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1826566	1	4	25.0	5.0	✓
Fluoride in Water by IC	E235.F	1826509	1	15	6.6	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1826672	1	11	9.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1826512	1	19	5.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1826513	1	19	5.2	5.0	✓
Sulfate in Water by IC	E235.SO4	1826514	1	19	5.2	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1827901	1	10	10.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1830117	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1827184	1	20	5.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1829275	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1829274	1	18	5.5	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1826507	1	19	5.2	5.0	✓
Ammonia by Fluorescence	E298	1826567	1	4	25.0	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1830814	1	13	7.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1826511	1	15	6.6	5.0	✓
Chloride in Water by IC	E235.Cl	1826510	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1831078	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1826814	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1826566	1	4	25.0	5.0	✓
Fluoride in Water by IC	E235.F	1826509	1	15	6.6	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1826672	1	11	9.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1826512	1	19	5.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1826513	1	19	5.2	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1830813	1	8	12.5	5.0	✓
Sulfate in Water by IC	E235.SO4	1826514	1	19	5.2	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	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
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
Total Hexavalent Chromium (Cr VI) by IC	E532	1827901	1	10	10.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1830117	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1827184	1	20	5.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1829275	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1829274	1	18	5.5	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1826507	1	19	5.2	5.0	✓
Ammonia by Fluorescence	E298	1826567	1	4	25.0	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1830814	1	13	7.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1826511	1	15	6.6	5.0	✓
Chloride in Water by IC	E235.Cl	1826510	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1831078	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1826814	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1826566	1	4	25.0	5.0	✓
Fluoride in Water by IC	E235.F	1826509	1	15	6.6	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1826672	1	11	9.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1826512	1	19	5.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1826513	1	19	5.2	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1830813	1	8	12.5	5.0	✓
Sulfate in Water by IC	E235.SO4	1826514	1	19	5.2	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1827901	1	10	10.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1830117	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1827184	1	20	5.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1829275	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1829274	1	18	5.5	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1826567	1	4	25.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1826511	1	15	6.6	5.0	✓
Chloride in Water by IC	E235.Cl	1826510	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1831078	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1826814	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1826566	1	4	25.0	5.0	✓
Fluoride in Water by IC	E235.F	1826509	1	15	6.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1826512	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>							
Matrix Spikes (MS) - Continued							
Nitrite in Water by IC (Low Level)	E235.NO2-L	1826513	1	19	5.2	5.0	✔
Sulfate in Water by IC	E235.SO4	1826514	1	19	5.2	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1827901	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1830117	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1827184	1	20	5.0	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1829275	1	9	11.1	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1829274	1	18	5.5	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 ₂ . 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 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 ₂ S" if reported represent the maximum possible H ₂ S concentration based on the total sulfide concentration in the sample. The H ₂ S calculation converts Total Sulphide as (S ₂ ⁻) and reports it as Total Sulphide as (H ₂ 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.
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.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
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)	<p>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.</p> <p>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.</p>
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)	<p>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.</p> <p>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.</p>
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Vancouver	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
Glycols (4 analytes) by GC-FID	E680E ALS Environmental - Vancouver	Water	EPA 8015D (mod)	Derivatized glycols are analyzed by GC-FID.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.



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

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Vancouver	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
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.



<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
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 : **VA24D4482**

Client : [REDACTED]

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 : [REDACTED]

Account Manager : [REDACTED]

Address : [REDACTED]

Telephone : [REDACTED]

Date Samples Received : 30-Dec-2024 16:50

Date Analysis Commenced : 31-Dec-2024

Issue Date : 07-Jan-2025 17:04

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 Organics, 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 Metals, Burnaby, British Columbia
[REDACTED]	[REDACTED]	Vancouver Metals, Burnaby, British Columbia

Page : 2 of 23
Work Order : VA24D4482
Client : Triton Environmental Consultants Ltd.
Project : 11964



General Comments

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

Key :

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

Workorder Comments

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1826507)											
VA24D4486-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	53.6	53.6	0.00%	20%	----
Physical Tests (QC Lot: 1830076)											
VA24D4481-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1830078)											
VA24D4481-001	Anonymous	Solids, total dissolved [TDS]	----	E162	13	mg/L	44	48	4	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1826509)											
FJ2403917-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.122	0.121	0.001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1826510)											
FJ2403917-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1826511)											
FJ2403917-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1826512)											
FJ2403917-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.488	0.490	0.391%	20%	----
Anions and Nutrients (QC Lot: 1826513)											
FJ2403917-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1826514)											
FJ2403917-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	21.3	21.4	0.606%	20%	----
Anions and Nutrients (QC Lot: 1826567)											
FJ2403926-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0260	0.0264	0.0004	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1826566)											
FJ2403926-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	2.11	2.49	0.38	Diff <2x LOR	----
Total Sulfides (QC Lot: 1830140)											
VA24D4481-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	<0.0015	0	Diff <2x LOR	----
Total Metals (QC Lot: 1827184)											
FJ2403922-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0063	0.0063	0.00002	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00032	0.00032	0.000001	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00010	0.00010	0.0000006	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0474	0.0516	8.33%	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	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1827184) - continued											
FJ2403922-001	Anonymous	Boron, total	7440-42-8	E420	0.010	mg/L	0.022	0.022	0.0001	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	168	166	1.11%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.000050	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	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.012	0.012	0.001	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0350	0.0342	2.33%	20%	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	99.4	104	4.72%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00729	0.00741	1.66%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.00277	0.00281	1.46%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00313	0.00328	0.00015	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	2.52	2.64	4.90%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00167	0.00173	0.00006	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.00212	0.00204	3.65%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	1.38	1.45	4.88%	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	12.3	13.1	6.40%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.278	0.284	2.19%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	222	222	0.384%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00032	0.00033	0.00001	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	0.00578	0.00564	2.41%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1830117)											



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1830117) - continued											
VA24D4463-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1826814)											
VA24D4486-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0147	0.0147	0.322%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00927	0.00927	0.0500%	20%	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00365	0.00367	0.357%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0375	0.0388	3.22%	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	0.094	0.098	0.003	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000143	0.0000162	0.0000019	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	25.0	25.0	0.309%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.00174	0.00175	0.538%	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	0.0567	0.0569	0.282%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.92	1.92	0.0901%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0698	0.0701	0.434%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.0106	0.0107	0.740%	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	13.4	14.0	3.99%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.0173	0.0172	0.882%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000970	0.000814	17.5%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	1.58	1.54	2.52%	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	31.5	31.7	0.685%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.476	0.482	1.12%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	25.2	24.4	3.21%	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	0.000046	0.000002	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1826814) - continued											
VA24D4486-001	Anonymous	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	0.00115	0.00113	1.38%	20%	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000451	0.000453	0.460%	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	----
Dissolved Metals (QC Lot: 1831078)											
VA24D4474-003	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1827901)											
VA24D4318-004	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1829274)											
VA24D4388-001	Anonymous	Benzene	71-43-2	E611C	0.50	µg/L	85.8	82.8	3.65%	30%	----
		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	0.60	µg/L	<0.60	<0.60	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	----
		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	4.5	µg/L	<4.5	<4.5	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611C	0.75	µg/L	<0.75	<0.75	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	5.30	µg/L	<5.30	<5.30	0	Diff <2x LOR	----
Ethylbenzene	100-41-4	E611C	0.50	µg/L	13.5	13.6	0.759%	30%	----		



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1829274) - continued											
VA24D4388-001	Anonymous	Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.50	µg/L	0.80	0.73	0.07	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	0.30	µg/L	<0.30	<0.30	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	2.86	2.84	0.803%	30%	----
		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	1.30	µg/L	<1.30	<1.30	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	4.76	4.87	2.14%	30%	----
		Xylene, o-	95-47-6	E611C	0.63	µg/L	<0.63	<0.63	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1829275)											
VA24D4411-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1826672)											
VA24D4482-001	WLNG EOP	Diethylene glycol	111-46-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Ethylene glycol	107-21-1	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Propylene glycol, 1,2-	57-55-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Triethylene glycol	112-27-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----



Method Blank (MB) Report

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

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1826507)						
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	<1.0	---
Physical Tests (QCLot: 1830076)						
Solids, total suspended [TSS]	---	E160	3	mg/L	<3.0	---
Physical Tests (QCLot: 1830078)						
Solids, total dissolved [TDS]	---	E162	10	mg/L	<10	---
Anions and Nutrients (QCLot: 1826509)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	---
Anions and Nutrients (QCLot: 1826510)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	---
Anions and Nutrients (QCLot: 1826511)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	---
Anions and Nutrients (QCLot: 1826512)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	---
Anions and Nutrients (QCLot: 1826513)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	---
Anions and Nutrients (QCLot: 1826514)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	---
Anions and Nutrients (QCLot: 1826567)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	---
Organic / Inorganic Carbon (QCLot: 1826566)						
Carbon, dissolved organic [DOC]	---	E358-L	0.5	mg/L	<0.50	---
Total Sulfides (QCLot: 1830140)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	---
Total Metals (QCLot: 1827184)						
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	---



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1827184) - continued						
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	----
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	----
Total Metals (QCLot: 1830117)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1826814)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1826814) - continued						
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	----
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	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1826814) - continued						
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	---
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	---
Dissolved Metals (QCLot: 1831078)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	---
Speciated Metals (QCLot: 1827901)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	---
Volatile Organic Compounds (QCLot: 1829274)						
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	---
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, 1,1,1,2,2-	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	---



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1829274) - continued						
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	<0.40	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 1829275)						
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Hydrocarbons (QCLot: 1830814)						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1830813)						
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	----
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A	0.05	µg/L	<0.050	----
Glycols (QCLot: 1826672)						
Diethylene glycol	111-46-6	E680E	5	mg/L	<5.0	----



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>
Glycols (QCLot: 1826672) - continued						
Ethylene glycol	107-21-1	E680E	5	mg/L	<5.0	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	<5.0	----
Triethylene glycol	112-27-6	E680E	5	mg/L	<5.0	----



Laboratory Control Sample (LCS) Report

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

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1826507)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	105	85.0	115	----
Physical Tests (QCLot: 1830076)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	99.7	85.0	115	----
Physical Tests (QCLot: 1830078)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	98.6	85.0	115	----
Anions and Nutrients (QCLot: 1826509)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	99.3	90.0	110	----
Anions and Nutrients (QCLot: 1826510)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1826511)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	108	85.0	115	----
Anions and Nutrients (QCLot: 1826512)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	99.7	90.0	110	----
Anions and Nutrients (QCLot: 1826513)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	98.9	90.0	110	----
Anions and Nutrients (QCLot: 1826514)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1826567)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	102	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1826566)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	96.2	80.0	120	----
Total Sulfides (QCLot: 1830140)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	105	80.0	120	----
Total Metals (QCLot: 1827184)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	102	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	108	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	105	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	105	80.0	120	----



Sub-Matrix: **Water**

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike		Recovery (%)		Recovery Limits (%)		Qualifier
					Target Concentration	LCS	Low	High			
Total Metals (QCLot: 1827184) - continued											
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	108	80.0	120	----		
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	110	80.0	120	----		
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	106	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	107	80.0	120	----		
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	103	80.0	120	----		
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	102	80.0	120	----		
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.6	80.0	120	----		
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	97.9	80.0	120	----		
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	95.1	80.0	120	----		
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	108	80.0	120	----		
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	110	80.0	120	----		
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	103	80.0	120	----		
Manganese, total	7439-96-5	E420	---	mg/L	0.25 mg/L	104	80.0	120	----		
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	107	80.0	120	----		
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	98.7	80.0	120	----		
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	96.2	80.0	120	----		
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	98.3	80.0	120	----		
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	97.5	80.0	120	----		
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	106	80.0	120	----		
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	113	80.0	120	----		
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	93.6	80.0	120	----		
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	102	80.0	120	----		
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	101	80.0	120	----		
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	96.5	80.0	120	----		
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	100	80.0	120	----		
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	105	80.0	120	----		
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	105	80.0	120	----		
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	108	80.0	120	----		
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	101	80.0	120	----		
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	109	80.0	120	----		
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	111	80.0	120	----		
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	97.5	80.0	120	----		
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	105	80.0	120	----		

Total Metals (QCLot: 1830117)



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830117) - continued									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	90.2	80.0	120	----
Dissolved Metals (QCLot: 1826814)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	98.9	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	97.4	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	98.7	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	94.3	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	98.3	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	87.4	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	88.8	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	90.8	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	97.0	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	94.0	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	93.8	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	93.4	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	92.0	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	97.9	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	92.6	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	94.1	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	95.0	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	93.8	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	92.9	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	91.2	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	93.4	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	94.3	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	99.6	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	89.4	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	99.7	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	95.4	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	91.3	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	98.0	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	97.1	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	91.2	80.0	120	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1826814) - continued									
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	98.2	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	101	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	94.1	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	96.6	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	94.7	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	103	80.0	120	----
Speciated Metals (QCLot: 1827901)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	99.2	80.0	120	----
Volatile Organic Compounds (QCLot: 1829274)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	91.7	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	86.8	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	96.2	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	119	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	93.8	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	103	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	95.4	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	106	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	94.2	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	81.1	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	96.6	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	89.2	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	93.4	70.0	130	----
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	94.4	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	88.5	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	81.3	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	96.3	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	99.0	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	94.9	70.0	130	----



Sub-Matrix: **Water**

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Target Concentration	Recovery (%)	Recovery Limits (%)		Qualifier
					LCS	Low	High		
Volatile Organic Compounds (QCLot: 1829274) - continued									
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	92.2	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	106	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	102	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	91.8	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	95.2	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	116	60.0	140	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	109	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	97.4	70.0	130	----
Hydrocarbons (QCLot: 1829275)									
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	6310 µg/L	91.2	70.0	130	----
Hydrocarbons (QCLot: 1830814)									
EPH (C10-C19)	---	E601A	250	µg/L	6490 µg/L	84.2	70.0	130	----
EPH (C19-C32)	---	E601A	250	µg/L	3360 µg/L	84.8	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1830813)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	102	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	102	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	103	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	101	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	93.1	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	99.1	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	99.2	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	104	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	100.0	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	95.0	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	105	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	102	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	97.5	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	93.4	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	99.3	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	102	50.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1830813) - continued									
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	108	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	101	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	114	60.0	130	----
Glycols (QCLot: 1826672)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	101	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	102	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	100.0	70.0	130	----



Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1826509)										
FJ2403917-002	Anonymous	Fluoride	16984-48-8	E235.F	1.04 mg/L	1 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1826510)										
FJ2403917-002	Anonymous	Chloride	16887-00-6	E235.Cl	106 mg/L	100 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1826511)										
FJ2403917-002	Anonymous	Bromide	24959-67-9	E235.Br-L	0.566 mg/L	0.5 mg/L	113	75.0	125	----
Anions and Nutrients (QCLot: 1826512)										
FJ2403917-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	2.64 mg/L	2.5 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1826513)										
FJ2403917-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.525 mg/L	0.5 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1826514)										
FJ2403917-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1826567)										
FJ2403926-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.106 mg/L	0.1 mg/L	106	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1826566)										
FJ2403926-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.24 mg/L	5 mg/L	84.7	70.0	130	----
Total Sulfides (QCLot: 1830140)										
VA24D4481-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.241 mg/L	0.2 mg/L	120	75.0	125	----
Total Metals (QCLot: 1827184)										
FJ2403922-002	Anonymous	Aluminum, total	7429-90-5	E420	0.184 mg/L	0.2 mg/L	92.2	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0374 mg/L	0.04 mg/L	93.6	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00933 mg/L	0.01 mg/L	93.3	70.0	130	----
		Boron, total	7440-42-8	E420	0.097 mg/L	0.1 mg/L	96.8	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00395 mg/L	0.004 mg/L	98.8	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00965 mg/L	0.01 mg/L	96.5	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0396 mg/L	0.04 mg/L	99.0	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0188 mg/L	0.02 mg/L	93.9	70.0	130	----
		Copper, total	7440-50-8	E420	0.0182 mg/L	0.02 mg/L	90.8	70.0	130	----
		Iron, total	7439-89-6	E420	1.90 mg/L	2 mg/L	95.1	70.0	130	----
		Lead, total	7439-92-1	E420	0.0187 mg/L	0.02 mg/L	93.5	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0887 mg/L	0.1 mg/L	88.7	70.0	130	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1827184) - continued										
FJ2403922-002	Anonymous	Magnesium, total	7439-95-4	E420	ND mg/L	---	ND	70.0	130	---
		Manganese, total	7439-96-5	E420	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	---
		Molybdenum, total	7439-98-7	E420	0.0204 mg/L	0.02 mg/L	102	70.0	130	---
		Nickel, total	7440-02-0	E420	0.0352 mg/L	0.04 mg/L	88.0	70.0	130	---
		Phosphorus, total	7723-14-0	E420	9.67 mg/L	10 mg/L	96.7	70.0	130	---
		Potassium, total	7440-09-7	E420	3.72 mg/L	4 mg/L	92.9	70.0	130	---
		Rubidium, total	7440-17-7	E420	0.0196 mg/L	0.02 mg/L	98.0	70.0	130	---
		Selenium, total	7782-49-2	E420	ND mg/L	---	ND	70.0	130	---
		Silicon, total	7440-21-3	E420	10.0 mg/L	10 mg/L	100	70.0	130	---
		Silver, total	7440-22-4	E420	0.00364 mg/L	0.004 mg/L	91.0	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	0.0441 mg/L	0.04 mg/L	110	70.0	130	---
		Thallium, total	7440-28-0	E420	0.00368 mg/L	0.004 mg/L	91.9	70.0	130	---
		Thorium, total	7440-29-1	E420	0.0125 mg/L	0.02 mg/L	62.7	70.0	130	MES
		Tin, total	7440-31-5	E420	0.0206 mg/L	0.02 mg/L	103	70.0	130	---
		Titanium, total	7440-32-6	E420	0.0390 mg/L	0.04 mg/L	97.6	70.0	130	---
		Tungsten, total	7440-33-7	E420	0.0199 mg/L	0.02 mg/L	99.5	70.0	130	---
		Uranium, total	7440-61-1	E420	ND mg/L	---	ND	70.0	130	---
		Vanadium, total	7440-62-2	E420	0.0981 mg/L	0.1 mg/L	98.1	70.0	130	---
		Zinc, total	7440-66-6	E420	0.345 mg/L	0.4 mg/L	86.3	70.0	130	---
		Zirconium, total	7440-67-7	E420	0.0407 mg/L	0.04 mg/L	102	70.0	130	---
Total Metals (QCLot: 1830117)										
VA24D4467-001	Anonymous	Mercury, total	7439-97-6	E508	ND mg/L	---	ND	70.0	130	---
Dissolved Metals (QCLot: 1826814)										
VA24D4486-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.190 mg/L	0.2 mg/L	95.1	70.0	130	---
		Antimony, dissolved	7440-36-0	E421	0.0191 mg/L	0.02 mg/L	95.6	70.0	130	---
		Arsenic, dissolved	7440-38-2	E421	0.0190 mg/L	0.02 mg/L	95.0	70.0	130	---
		Barium, dissolved	7440-39-3	E421	0.0195 mg/L	0.02 mg/L	97.3	70.0	130	---
		Beryllium, dissolved	7440-41-7	E421	0.0366 mg/L	0.04 mg/L	91.6	70.0	130	---
		Bismuth, dissolved	7440-69-9	E421	0.00935 mg/L	0.01 mg/L	93.5	70.0	130	---
		Boron, dissolved	7440-42-8	E421	0.085 mg/L	0.1 mg/L	84.9	70.0	130	---
		Cadmium, dissolved	7440-43-9	E421	0.00355 mg/L	0.004 mg/L	88.7	70.0	130	---
		Calcium, dissolved	7440-70-2	E421	3.51 mg/L	4 mg/L	87.8	70.0	130	---
		Cesium, dissolved	7440-46-2	E421	0.00948 mg/L	0.01 mg/L	94.8	70.0	130	---
		Chromium, dissolved	7440-47-3	E421	0.0377 mg/L	0.04 mg/L	94.2	70.0	130	---
		Cobalt, dissolved	7440-48-4	E421	0.0189 mg/L	0.02 mg/L	94.3	70.0	130	---
		Copper, dissolved	7440-50-8	E421	0.0187 mg/L	0.02 mg/L	93.5	70.0	130	---
		Iron, dissolved	7439-89-6	E421	1.87 mg/L	2 mg/L	93.7	70.0	130	---
		Lead, dissolved	7439-92-1	E421	0.0190 mg/L	0.02 mg/L	95.1	70.0	130	---
		Lithium, dissolved	7439-93-2	E421	0.0926 mg/L	0.1 mg/L	92.6	70.0	130	---
		Magnesium, dissolved	7439-95-4	E421	0.922 mg/L	1 mg/L	92.2	70.0	130	---



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1826814) - continued										
VA24D4486-002	Anonymous	Manganese, dissolved	7439-96-5	E421	0.0192 mg/L	0.02 mg/L	96.1	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0194 mg/L	0.02 mg/L	96.9	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0373 mg/L	0.04 mg/L	93.3	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	9.43 mg/L	10 mg/L	94.3	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	3.58 mg/L	4 mg/L	89.6	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0182 mg/L	0.02 mg/L	91.0	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0368 mg/L	0.04 mg/L	91.9	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.40 mg/L	10 mg/L	94.0	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00379 mg/L	0.004 mg/L	94.7	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	1.93 mg/L	2 mg/L	96.4	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	0.0191 mg/L	0.02 mg/L	95.4	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	17.6 mg/L	20 mg/L	88.0	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0395 mg/L	0.04 mg/L	98.7	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00374 mg/L	0.004 mg/L	93.5	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0188 mg/L	0.02 mg/L	93.8	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0182 mg/L	0.02 mg/L	90.9	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	0.0188 mg/L	0.02 mg/L	94.1	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00390 mg/L	0.004 mg/L	97.5	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0924 mg/L	0.1 mg/L	92.4	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.380 mg/L	0.4 mg/L	94.9	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0384 mg/L	0.04 mg/L	96.1	70.0	130	----
Dissolved Metals (QCLot: 1831078)										
VA24D4474-004	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000970 mg/L	0 mg/L	97.0	70.0	130	----
Speciated Metals (QCLot: 1827901)										
VA24D4481-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.254 mg/L	0.25 mg/L	102	70.0	130	----
Volatile Organic Compounds (QCLot: 1829274)										
VA24D4388-002	Anonymous	Benzene	71-43-2	E611C	ND µg/L	----	ND	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	88.6 µg/L	100 µg/L	88.6	60.0	140	----
		Bromoform	75-25-2	E611C	95.0 µg/L	100 µg/L	95.0	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Chlorobenzene	108-90-7	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Chloroethane	75-00-3	E611C	111 µg/L	100 µg/L	111	50.0	150	----
		Chloroform	67-66-3	E611C	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Chloromethane	74-87-3	E611C	90.0 µg/L	100 µg/L	90.0	50.0	150	----
		Dibromochloromethane	124-48-1	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611C	92.6 µg/L	100 µg/L	92.6	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	82.3 µg/L	100 µg/L	82.3	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	90.9 µg/L	100 µg/L	90.9	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	90.2 µg/L	100 µg/L	90.2	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
Volatile Organic Compounds (QCLot: 1829274) - continued										
VA24D4388-002	Anonymous	Dichloroethylene, trans-1,2-	156-60-5	E611C	93.3 µg/L	100 µg/L	93.3	60.0	140	----
		Dichloromethane	75-09-2	E611C	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	89.1 µg/L	100 µg/L	89.1	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	84.6 µg/L	100 µg/L	84.6	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	98.7 µg/L	100 µg/L	98.7	60.0	140	----
		Ethylbenzene	100-41-4	E611C	ND µg/L	----	ND	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	97.5 µg/L	100 µg/L	97.5	60.0	140	----
		Styrene	100-42-5	E611C	92.2 µg/L	100 µg/L	92.2	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	90.1 µg/L	100 µg/L	90.1	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	108 µg/L	100 µg/L	108	60.0	140	----
		Toluene	108-88-3	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	93.8 µg/L	100 µg/L	93.8	60.0	140	----
		Trichloroethylene	79-01-6	E611C	94.9 µg/L	100 µg/L	94.9	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	108 µg/L	100 µg/L	108	50.0	150	----
		Vinyl chloride	75-01-4	E611C	96.9 µg/L	100 µg/L	96.9	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	219 µg/L	200 µg/L	109	60.0	140	----
		Xylene, o-	95-47-6	E611C	95.9 µg/L	100 µg/L	95.9	60.0	140	----
Hydrocarbons (QCLot: 1829275)										
VA24D4482-001	WLNG EOP	VHw (C6-C10)	----	E581.VH+F1	5290 µg/L	6310 µg/L	83.8	60.0	140	----

Qualifiers

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



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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

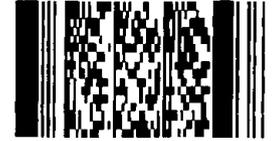
COC Number: 20 -

Page of

Environmental Division Vancouver

Work Order Reference

VA24D4482



Telephone: +1 604 253 4168

Report To Contact and company name below will appear on the final report Company: Contact: Phone: Street: City/Province: Postal Code: Invoice To: Company: Contact:		Reports / Recipients Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Merge QC/QCI Reports with COA <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax Email 2 Email 3 Select Invoice D Email 1 or Fax Email 2			Turnaround Time (TAT) Requested <input checked="" type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surcharge minim <input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surcharge minim <input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surcharge minim <input type="checkbox"/> 1 day [E] if received by 3pm M-F - 100% rush surcharge minim <input type="checkbox"/> Same day [E2] if received by 10am M-S - 200% rush surcharge Additional fees may apply to rush requests on weekends. Date and Time Required for all E&P-TATs: 07:30 AM - 5:00 PM am/pm For all tests with rush TATs requested, please contact your AM to confirm availability.																																																																																						
Project Information ALS Account # / Quote #: VA23-TRIT100-012 Job #: 11964 PO / AFE: 11964 - Task 40 - Phase 3C-4C LSD: ALS Lab Work Order # (ALS use only): <i>DMO</i> ALS Contact: Sampler:		Oil and Gas Required Fields (client use) AFE/Cost Center: PO# Major/Minor Code: Routing Code: Requisitioner: Location:			Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below <table border="1"> <thead> <tr> <th rowspan="2">NUMBER OF CONTAINERS</th> <th colspan="14">Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below</th> <th rowspan="2">SAMPLES ON HOLD</th> <th rowspan="2">EXTENDED STORAGE REQUIRED</th> <th rowspan="2">SUSPECTED HAZARD (see notes)</th> </tr> <tr> <th>Total metals + mercury</th> <th>Dissolved metals + mercury</th> <th>Total hexavalent chromium</th> <th>Total trivalent chromium</th> <th>TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)</th> <th>Total sulfide (low) (as H2S), Unionized Sulfide (low)</th> <th>Nutrients (ammonia, ammonium, total)</th> <th>VOC/VPH</th> <th>EPH, PAH, LEPH/HEPH</th> <th>DOC</th> <th>Glycols</th> <th>General parameters (alkalinity)</th> </tr> </thead> <tbody> <tr> <td>15</td> <td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td></td><td></td><td></td> </tr> <tr> <td>15</td> <td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td> </tr> <tr> <td>12</td> <td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td> </tr> </tbody> </table>			NUMBER OF CONTAINERS	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below														SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)	Total metals + mercury	Dissolved metals + mercury	Total hexavalent chromium	Total trivalent chromium	TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)	Total sulfide (low) (as H2S), Unionized Sulfide (low)	Nutrients (ammonia, ammonium, total)	VOC/VPH	EPH, PAH, LEPH/HEPH	DOC	Glycols	General parameters (alkalinity)	15	R	R	R	R	R	R	R	R	R	R	R	R	R	R				15	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	12	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
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12	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R																																																																										
Drinking Water (DW) Samples¹ (client use) Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Are samples for human consumption/ use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)			SAMPLE RECEIPT DETAILS (ALS use only) Cooling Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input checked="" type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A INITIAL COOLER TEMPERATURES °C: FINAL COOLER TEMPERATURES °C: 10																																																																																						
SHIPMENT RELEASE (client use) Time: Received by: Date:		INITIAL SHIPMENT RECEPTION (ALS use only) Time: Received by: Date:			FINAL SHIPMENT RECEPTION (ALS use only) Time: Received by: Date:																																																																																						

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white report copy.
1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

ALS 2018 FRONT

CERTIFICATE OF ANALYSIS

Work Order	: VA25A0023	Laboratory	: ALS Environmental - Vancouver
Client	: Triton Environmental Consultants Ltd.	Account Manager	: [Redacted]
Contact	: [Redacted]	Address	: [Redacted]
Address	: [Redacted]	Telephone	: [Redacted]
Telephone	: [Redacted]	Date Samples Received	: 31-Dec-2024 13:30
Project	: 11964	Date Analysis Commenced	: 02-Jan-2025
PO	: 11964-Task 40- Phase 3C-4C	Issue Date	: 08-Jan-2025 11:31
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA23-TRIT100-012		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
[Redacted]		Inorganics, Edmonton, Alberta
[Redacted]		Metals, Burnaby, British Columbia
[Redacted]		Organics, Burnaby, British Columbia
[Redacted]		Metals, Burnaby, British Columbia
[Redacted]		Inorganics, Burnaby, British Columbia
[Redacted]		Metals, Burnaby, British Columbia
[Redacted]		Administration, Burnaby, British Columbia
[Redacted]		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
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	31-Dec-2024 10:01	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0023-001	----	----	----	----	----
					Result	----	----	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm	147.00	----	----	----	----	----
pH, field	----	EF001/VA	0.10	pH units	7.79	----	----	----	----	----
Temperature, field	----	EF001/VA	0.10	°C	9.90	----	----	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L	57.8	----	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	57.3	----	----	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	81	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	----	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	61.0	----	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0106	----	----	----	----	----
Ammonia, un-ionized (as N), field	7664-41-7	EC298A/VA	0.0010	mg/L	<0.0010	----	----	----	----	----
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	1.45	----	----	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.210	----	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.0198	----	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	<0.0010	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	5.11	----	----	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	<0.50	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	31-Dec-2024 10:01	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0023-001	----	----	----	----	
					Result	----	----	----	----	
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	----	----	----	----	
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	----	----	----	----	
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	----	----	----	----	
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0190	----	----	----	----	
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00208	----	----	----	----	
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00297	----	----	----	----	
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	0.012	----	----	----	----	
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000100 ^{DLM}	----	----	----	----	
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	21.3	----	----	----	----	
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000011	----	----	----	----	
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	0.00154	----	----	----	----	
Iron, total	7439-89-6	E420/VA	0.010	mg/L	<0.010	----	----	----	----	
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000342	----	----	----	----	
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0025	----	----	----	----	
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	1.01	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	---	---	---	---
					Client sampling date / time	31-Dec-2024 10:01	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0023-001	---	---	---	---	
						Result	---	---	---	---
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00126	---	---	---	---	
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L	<0.0000050	---	---	---	---	
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.0183	---	---	---	---	
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	0.830	---	---	---	---	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00124	---	---	---	---	
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	0.000099	---	---	---	---	
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	6.19	---	---	---	---	
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	---	---	---	---	
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	3.34	---	---	---	---	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0402	---	---	---	---	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	1.58	---	---	---	---	
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	0.00029	---	---	---	---	
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.00800	---	---	---	---	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	---	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	31-Dec-2024 10:01	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0023-001	----	----	----	----	----
						Result	----	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	0.0208	----	----	----	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0093	----	----	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	0.00198	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00285	----	----	----	----	----
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	0.012	----	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000100 ^{DLM}	----	----	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	21.5	----	----	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	0.000011	----	----	----	----	----
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	0.00103	----	----	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	<0.010	----	----	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	0.000231	----	----	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	0.0024	----	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	1.00	----	----	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00116	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	---	---	---	---
					Client sampling date / time	31-Dec-2024 10:01	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0023-001	---	---	---	---	---
					Result	---	---	---	---	---
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.000050	mg/L	<0.000050	---	---	---	---	---
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	0.0186	---	---	---	---	---
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	0.834	---	---	---	---	---
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00122	---	---	---	---	---
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	0.000080	---	---	---	---	---
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	5.98	---	---	---	---	---
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000010	---	---	---	---	---
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	3.43	---	---	---	---	---
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0409	---	---	---	---	---
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	1.49	---	---	---	---	---
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	0.00029	---	---	---	---	---
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L	0.00805	---	---	---	---	---
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L	<0.00050	---	---	---	---	---
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L	0.0212	---	---	---	---	---



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	31-Dec-2024 10:01	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0023-001	----	----	----	----	
						Result	----	----	----	----
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	<0.00020	----	----	----	----	
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	----	----	----	----	
Dissolved metals filtration location	----	EP421/VA	-	-	Field	----	----	----	----	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050 ^{DLM}	----	----	----	----	
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Aggregate Organics										
Phenols, total (4AAP)	----	E562/EO	0.0010	mg/L	<0.0010	----	----	----	----	
Volatile Organic Compounds										
Chlorobenzene	108-90-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Chloromethane	74-87-3	E611C/VA	5.0	µg/L	<5.0	----	----	----	----	
Dichlorobenzene, 1,2-	95-50-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Dichlorobenzene, 1,3-	541-73-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Dichlorobenzene, 1,4-	106-46-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Dichloropropane, 1,2-	78-87-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Dichloropropylene, cis-1,3-	10061-01-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Dichloropropylene, cis+trans-1,3-	542-75-6	E611C/VA	0.75	µg/L	<0.75	----	----	----	----	
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C/VA	0.20	µg/L	<0.20	----	----	----	----	
Trichloroethane, 1,1,2-	79-00-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Trichlorofluoromethane	75-69-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	31-Dec-2024 10:01	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0023-001	----	----	----	----	
						Result	----	----	----	----
Volatile Organic Compounds [Drycleaning]										
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	----	----	----	----	
Volatile Organic Compounds [Fuels]										
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	----	----	----	----	
Toluene	108-88-3	E611CVA	0.40	µg/L	<0.40	----	----	----	----	
Xylene, m+p-	179601-23-1	E611CVA	0.40	µg/L	<0.40	----	----	----	----	
Xylene, o-	95-47-6	E611CVA	0.30	µg/L	<0.30	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	31-Dec-2024 10:01	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0023-001	----	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds [Fuels]										
Xylenes, total	1330-20-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Volatile Organic Compounds [THMs]										
Bromodichloromethane	75-27-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Bromoform	75-25-2	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Chloroform	67-66-3	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dibromochloromethane	124-48-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Hydrocarbons										
EPH (C10-C19)	----	E601A/VA	250	µg/L	<250	----	----	----	----	----
EPH (C19-C32)	----	E601A/VA	250	µg/L	<250	----	----	----	----	----
VHw (C6-C10)	----	E581.VH+F1/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	----	----	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%	66.3	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/V A	1.0	%	97.9	----	----	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%	83.0	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611C/VA	1.0	%	100.0	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	31-Dec-2024 10:01	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0023-001	----	----	----	----	----
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Acridine	260-94-6	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Anthracene	120-12-7	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L	<0.0050	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L	<0.015	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Chrysene	218-01-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L	<0.0050	----	----	----	----	----
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Fluorene	86-73-7	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
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	----	----	----	----	----
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	---	---	---	---
					Client sampling date / time	31-Dec-2024 10:01	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0023-001	---	---	---	---	---
						Result	---	---	---	---
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	73.6	---	---	---	---	---
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	81.5	---	---	---	---	---
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	83.7	---	---	---	---	---
Glycols										
Diethylene glycol	111-46-6	E680E/VA	5.0	mg/L	<5.0	---	---	---	---	---
Ethylene glycol	107-21-1	E680E/VA	5.0	mg/L	<5.0	---	---	---	---	---
Propylene glycol, 1,2-	57-55-6	E680E/VA	5.0	mg/L	<5.0	---	---	---	---	---
Triethylene glycol	112-27-6	E680E/VA	5.0	mg/L	<5.0	---	---	---	---	---
Glycols, total (EG+DEG+PG)	---	E680E/VA	10	mg/L	<10	---	---	---	---	---
Glycols Surrogates										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%	95.3	---	---	---	---	---

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

QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : VA25A0023</p> <p>Client : Triton Environmental Consultants Ltd.</p> <p>Contact : [Redacted]</p> <p>Address : [Redacted]</p> <p>Telephone : [Redacted]</p> <p>Project : 11964</p> <p>PO : 11964-Task 40- Phase 3C-4C</p> <p>C-O-C number : ----</p> <p>Sampler : ----</p> <p>Site : Water Analysis</p> <p>Quote number : VA23-TRIT100-012 _V2</p> <p>No. of samples received : 1</p> <p>No. of samples analysed : 1</p>	<p>Page : 1 of 14</p> <p>Laboratory : ALS Environmental - Vancouver</p> <p>Account Manager : [Redacted]</p> <p>Address : [Redacted]</p> <p>Telephone : [Redacted]</p> <p>Date Samples Received : 31-Dec-2024 13:30</p> <p>Issue Date : 08-Jan-2025 11:29</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
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

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



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Silver, dissolved	7440-22-4	E421	48.0 % ^{MS-Ag}	70.0-130%	Recovery less than lower data quality objective

Result Qualifiers

Qualifier	Description
MS-Ag	<i>MS-Ag: Matrix Spike recovery for silver was marginally below DQO (40 to <60%) due to its instability in the sample matrix. Silver was not detected. Reported result (< LOR) is reliable</i>



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		
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry											
Amber glass total (sulfuric acid) WLNG EOP	E562	31-Dec-2024	03-Jan-2025	28 days	3 days	✔	03-Jan-2025	28 days	3 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) WLNG EOP	E298	31-Dec-2024	03-Jan-2025	28 days	3 days	✔	03-Jan-2025	28 days	3 days	✔	
Anions and Nutrients : Bromide in Water by IC (Low Level)											
HDPE WLNG EOP	E235.Br-L	31-Dec-2024	02-Jan-2025	28 days	2 days	✔	02-Jan-2025	28 days	2 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE WLNG EOP	E235.Cl	31-Dec-2024	02-Jan-2025	28 days	2 days	✔	02-Jan-2025	28 days	2 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE WLNG EOP	E235.F	31-Dec-2024	02-Jan-2025	28 days	2 days	✔	02-Jan-2025	28 days	2 days	✔	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO3-L	31-Dec-2024	02-Jan-2025	3 days	2 days	✔	02-Jan-2025	3 days	2 days	✔	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO2-L	31-Dec-2024	02-Jan-2025	3 days	2 days	✔	02-Jan-2025	3 days	2 days	✔	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Sulfate in Water by IC											
HDPE WLNG EOP	E235.SO4	31-Dec-2024	02-Jan-2025	28 days	2 days	✔	02-Jan-2025	28 days	2 days	✔	
Dissolved Metals : Dissolved Mercury in Water by CVAAS											
Glass vial dissolved (hydrochloric acid) WLNG EOP	E509	31-Dec-2024	08-Jan-2025	28 days	8 days	✔	08-Jan-2025	28 days	8 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) WLNG EOP	E421	31-Dec-2024	06-Jan-2025	180 days	7 days	✔	08-Jan-2025	180 days	8 days	✔	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine											
Glass vial dissolved (hydrochloric acid) WLNG EOP	EF001	31-Dec-2024	----	----	----		07-Jan-2025	----	7 days		
Glycols : Glycols (4 analytes) by GC-FID											
Glass vial WLNG EOP	E680E	31-Dec-2024	05-Jan-2025	7 days	5 days	✔	06-Jan-2025	40 days	1 days	✔	
Hydrocarbons : BC PHCs - EPH by GC-FID											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E601A	31-Dec-2024	06-Jan-2025	14 days	7 days	✔	07-Jan-2025	40 days	0 days	✔	
Hydrocarbons : VH and F1 by Headspace GC-FID											
Glass vial (sodium bisulfate) WLNG EOP	E581.VH+F1	31-Dec-2024	03-Jan-2025	14 days	3 days	✔	03-Jan-2025	14 days	4 days	✔	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)											
Amber glass dissolved (sulfuric acid) WLNG EOP	E358-L	31-Dec-2024	03-Jan-2025	28 days	3 days	✔	03-Jan-2025	28 days	3 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE WLNG EOP	E290	31-Dec-2024	02-Jan-2025	14 days	2 days	✔	02-Jan-2025	14 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	
Physical Tests : TDS by Gravimetry										
HDPE WLNG EOP	E162	31-Dec-2024	----	----	----		05-Jan-2025	7 days	5 days	✔
Physical Tests : TSS by Gravimetry										
HDPE WLNG EOP	E160	31-Dec-2024	----	----	----		05-Jan-2025	7 days	5 days	✔
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	31-Dec-2024	06-Jan-2025	14 days	7 days	✔	07-Jan-2025	40 days	0 days	✔
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	31-Dec-2024	----	----	----		02-Jan-2025	28 days	2 days	✔
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG EOP	E508	31-Dec-2024	08-Jan-2025	28 days	8 days	✔	08-Jan-2025	28 days	8 days	✔
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG EOP	E420	31-Dec-2024	06-Jan-2025	180 days	7 days	✔	08-Jan-2025	180 days	8 days	✔
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	31-Dec-2024	----	----	----		06-Jan-2025	7 days	6 days	✔
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate) WLNG EOP	E611C	31-Dec-2024	03-Jan-2025	14 days	3 days	✔	03-Jan-2025	14 days	4 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	
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1828201	1	14	7.1	5.0	✔
Ammonia by Fluorescence	E298	1829456	1	20	5.0	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1828198	1	1	100.0	5.0	✔
Chloride in Water by IC	E235.Cl	1828194	1	20	5.0	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1832332	1	14	7.1	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1828752	1	18	5.5	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829452	1	20	5.0	5.0	✔
Fluoride in Water by IC	E235.F	1828196	1	13	7.6	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1828195	1	20	5.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1828197	1	14	7.1	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1828988	1	14	7.1	5.0	✔
Sulfate in Water by IC	E235.SO4	1828193	1	20	5.0	5.0	✔
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1828403	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1832296	1	16	6.2	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1828742	1	20	5.0	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1829275	1	9	11.1	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1829274	1	18	5.5	5.0	✔
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1828201	1	14	7.1	5.0	✔
Ammonia by Fluorescence	E298	1829456	1	20	5.0	5.0	✔
BC PHCs - EPH by GC-FID	E601A	1830929	1	12	8.3	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1828198	1	1	100.0	5.0	✔
Chloride in Water by IC	E235.Cl	1828194	1	20	5.0	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1832332	1	14	7.1	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1828752	1	18	5.5	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829452	1	20	5.0	5.0	✔
Fluoride in Water by IC	E235.F	1828196	1	13	7.6	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1828195	1	20	5.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1828197	1	14	7.1	5.0	✔
PAHs in Water by Hexane LVI GC-MS	E641A	1830930	1	15	6.6	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1828988	1	14	7.1	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
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
Sulfate in Water by IC	E235.SO4	1828193	1	20	5.0	5.0	✔
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1828403	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1832296	1	16	6.2	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1828742	1	20	5.0	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1829275	1	9	11.1	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1829274	1	18	5.5	5.0	✔
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1828201	1	14	7.1	5.0	✔
Ammonia by Fluorescence	E298	1829456	1	20	5.0	5.0	✔
BC PHCs - EPH by GC-FID	E601A	1830929	1	12	8.3	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1828198	1	1	100.0	5.0	✔
Chloride in Water by IC	E235.Cl	1828194	1	20	5.0	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1832332	1	14	7.1	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1828752	1	18	5.5	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829452	1	20	5.0	5.0	✔
Fluoride in Water by IC	E235.F	1828196	1	13	7.6	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1828195	1	20	5.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1828197	1	14	7.1	5.0	✔
PAHs in Water by Hexane LVI GC-MS	E641A	1830930	1	15	6.6	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1828988	1	14	7.1	5.0	✔
Sulfate in Water by IC	E235.SO4	1828193	1	20	5.0	5.0	✔
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1828403	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1832296	1	16	6.2	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1828742	1	20	5.0	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1829275	1	9	11.1	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1829274	1	18	5.5	5.0	✔
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1829456	1	20	5.0	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1828198	0	1	0.0	5.0	✖
Chloride in Water by IC	E235.Cl	1828194	1	20	5.0	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1832332	1	14	7.1	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1828752	1	18	5.5	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>							
Matrix Spikes (MS) - Continued							
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829452	1	20	5.0	5.0	✔
Fluoride in Water by IC	E235.F	1828196	1	13	7.6	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1828195	1	20	5.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1828197	1	14	7.1	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1828988	1	14	7.1	5.0	✔
Sulfate in Water by IC	E235.SO4	1828193	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1828403	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1832296	1	16	6.2	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1828742	1	20	5.0	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1829275	1	9	11.1	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1829274	1	18	5.5	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 ₂ . 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 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 ₂ S" if reported represent the maximum possible H ₂ S concentration based on the total sulfide concentration in the sample. The H ₂ S calculation converts Total Sulphide as (S ₂ ⁻) and reports it as Total Sulphide as (H ₂ 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.
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 ₃ Fe(CN) ₆) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
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)	<p>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.</p> <p>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.</p>
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)	<p>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.</p> <p>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.</p>
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Vancouver	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
Glycols (4 analytes) by GC-FID	E680E ALS Environmental - Vancouver	Water	EPA 8015D (mod)	Derivatized glycols are analyzed by GC-FID.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.



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

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Vancouver	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
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.



<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
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 : **VA25A0023**
Client : Triton Environmental Consultants Ltd.
Contact :
Address :

Telephone : ----
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 :
Address :

Telephone :
Date Samples Received : 31-Dec-2024 13:30
Date Analysis Commenced : 02-Jan-2025
Issue Date : 08-Jan-2025 11:29

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
		Edmonton Inorganics, Edmonton, Alberta
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Organics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Administration, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia

Page : 2 of 23
Work Order : VA25A0023
Client : Triton Environmental Consultants Ltd.
Project : 11964



General Comments

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

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1828201)											
VA25A0021-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1830076)											
VA24D4481-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1830078)											
VA24D4481-001	Anonymous	Solids, total dissolved [TDS]	----	E162	13	mg/L	44	48	4	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1828193)											
VA25A0023-001	WLNG EOP	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	5.11	5.14	0.512%	20%	----
Anions and Nutrients (QC Lot: 1828194)											
VA25A0023-001	WLNG EOP	Chloride	16887-00-6	E235.Cl	0.50	mg/L	1.45	1.46	0.004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1828195)											
VA25A0023-001	WLNG EOP	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0198	0.0199	0.0001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1828196)											
VA25A0023-001	WLNG EOP	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.210	0.208	0.927%	20%	----
Anions and Nutrients (QC Lot: 1828197)											
VA25A0023-001	WLNG EOP	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1828198)											
VA25A0023-001	WLNG EOP	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829456)											
VA24D4544-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0094	0.0093	0.00007	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1829452)											
VA24D4544-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	0.54	<0.50	0.04	Diff <2x LOR	----
Total Sulfides (QC Lot: 1830800)											
TY2500054-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0257	0.0247	4.09%	20%	----
Total Metals (QC Lot: 1828742)											
VA25A0021-006	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0076	0.0089	0.0013	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00011	<0.00010	0.000007	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00150	0.00151	1.06%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0403	0.0401	0.527%	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	----



Sub-Matrix: **Water** **Laboratory Duplicate (DUP) Report**

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1828742) - continued											
VA25A0021-006	Anonymous	Boron, total	7440-42-8	E420	0.010	mg/L	0.014	0.014	0.0001	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000350	mg/L	<0.0000400	<0.0000350	0.0000050	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	82.6	82.8	0.169%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000137	0.000135	1.56%	20%	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.0100	0.0101	0.475%	20%	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.014	0.015	0.0010	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0033	0.0032	0.00008	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	14.8	14.7	0.352%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0206	0.0206	0.169%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.227	0.223	1.82%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00078	0.00076	0.00002	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	0.327	0.378	0.052	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	8.99	8.92	0.708%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00227	0.00230	1.51%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000360	0.000389	0.000029	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	12.4	12.5	0.865%	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	40.6	40.6	0.0118%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	3.38	3.34	1.27%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	47.5	47.7	0.405%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	0.00062	0.00064	0.00002	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00060	0.00055	0.00005	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	0.00052	0.00050	0.00001	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00136	0.00138	1.08%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00139	0.00140	0.000005	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----

Total Metals (QC Lot: 1832296)



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1832296) - continued											
VA25A0007-003	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1828752)											
VA25A0015-003	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0215	0.0234	8.43%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00383	0.00384	0.118%	20%	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00414	0.00396	4.30%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0461	0.0435	5.78%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.027	0.028	0.001	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	40.2	41.3	2.75%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000581	0.000593	2.01%	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	0.00042	0.00039	0.00003	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00028	0.00027	0.00002	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	0.0062	0.0064	0.0002	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	16.7	16.1	3.33%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0496	0.0488	1.60%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00444	0.00461	3.69%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00339	0.00328	0.00011	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	5.37	5.31	1.06%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00719	0.00714	0.731%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000071	0.000123	0.000052	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	4.05	3.87	4.46%	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	12.4	12.0	3.32%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.387	0.398	2.65%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	13.4	12.4	7.19%	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	0.000011	0.0000008	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1828752) - continued											
VA25A0015-003	Anonymous	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	0.0272	0.0274	0.424%	20%	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00220	0.00221	0.347%	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	0.0011	0.0010	0.0001	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1832332)											
VA25A0007-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1828403)											
VA24D4533-021	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1828988)											
VA24D4413-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1829274)											
VA24D4388-001	Anonymous	Benzene	71-43-2	E611C	0.50	µg/L	85.8	82.8	3.65%	30%	----
		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	0.60	µg/L	<0.60	<0.60	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	----
		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	4.5	µg/L	<4.5	<4.5	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611C	0.75	µg/L	<0.75	<0.75	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1829274) - continued											
VA24D4388-001	Anonymous	Dichloropropylene, trans-1,3-	10061-02-6	E611C	5.30	µg/L	<5.30	<5.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611C	0.50	µg/L	13.5	13.6	0.759%	30%	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.50	µg/L	0.80	0.73	0.07	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	0.30	µg/L	<0.30	<0.30	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	2.86	2.84	0.803%	30%	----
		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	1.30	µg/L	<1.30	<1.30	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	4.76	4.87	2.14%	30%	----
		Xylene, o-	95-47-6	E611C	0.63	µg/L	<0.63	<0.63	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1829275)											
VA24D4411-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1830136)											
VA25A0023-001	WLNG EOP	Diethylene glycol	111-46-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Ethylene glycol	107-21-1	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Propylene glycol, 1,2-	57-55-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Triethylene glycol	112-27-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----



Method Blank (MB) Report

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

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1828201)						
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	<1.0	---
Physical Tests (QCLot: 1830076)						
Solids, total suspended [TSS]	---	E160	3	mg/L	<3.0	---
Physical Tests (QCLot: 1830078)						
Solids, total dissolved [TDS]	---	E162	10	mg/L	<10	---
Anions and Nutrients (QCLot: 1828193)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	---
Anions and Nutrients (QCLot: 1828194)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	---
Anions and Nutrients (QCLot: 1828195)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	---
Anions and Nutrients (QCLot: 1828196)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	---
Anions and Nutrients (QCLot: 1828197)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	---
Anions and Nutrients (QCLot: 1828198)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	---
Anions and Nutrients (QCLot: 1829456)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	---
Organic / Inorganic Carbon (QCLot: 1829452)						
Carbon, dissolved organic [DOC]	---	E358-L	0.5	mg/L	<0.50	---
Total Sulfides (QCLot: 1830800)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	---
Total Metals (QCLot: 1828742)						
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	---



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1828742) - continued						
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	----
Total Metals (QCLot: 1832296)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1828752)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1828752) - continued						
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	----
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	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1828752) - continued						
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1832332)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1828403)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1828988)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1829274)						
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	----
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	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1829274) - continued						
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	<0.20	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611C	0.4	µg/L	<0.40	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	<0.40	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 1829275)						
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Hydrocarbons (QCLot: 1830929)						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1830930)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
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	----



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>
Polycyclic Aromatic Hydrocarbons (QCLot: 1830930) - continued						
Quinoline	91-22-5	E641A	0.05	µg/L	<0.050	----
Glycols (QCLot: 1830136)						
Diethylene glycol	111-46-6	E680E	5	mg/L	<5.0	----
Ethylene glycol	107-21-1	E680E	5	mg/L	<5.0	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	<5.0	----
Triethylene glycol	112-27-6	E680E	5	mg/L	<5.0	----



Laboratory Control Sample (LCS) Report

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

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1828201)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	105	85.0	115	----
Physical Tests (QCLot: 1830076)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	99.7	85.0	115	----
Physical Tests (QCLot: 1830078)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	98.6	85.0	115	----
Anions and Nutrients (QCLot: 1828193)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1828194)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1828195)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1828196)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1828197)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	98.0	90.0	110	----
Anions and Nutrients (QCLot: 1828198)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	108	85.0	115	----
Anions and Nutrients (QCLot: 1829456)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	104	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1829452)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	109	80.0	120	----
Total Sulfides (QCLot: 1830800)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	103	80.0	120	----
Total Metals (QCLot: 1828742)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	103	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	109	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	102	80.0	120	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QLot: 1828742) - continued									
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	102	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	97.8	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	96.1	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	99.5	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	105	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	102	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	99.6	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	97.1	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	98.4	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	98.3	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	95.0	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	100	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	99.4	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	104	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	102	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	104	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	93.5	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	105	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	98.8	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	93.4	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	98.6	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	95.3	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	98.7	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	96.2	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	97.9	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	100	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	99.2	80.0	120	----
Total Metals (QLot: 1832296)									



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1832296) - continued									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	101	80.0	120	----
Dissolved Metals (QCLot: 1828752)									
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	102	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	103	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	101	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	94.8	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	99.5	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	104	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	99.3	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	99.2	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	98.0	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	97.6	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	94.5	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	98.5	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	99.3	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	98.3	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	102	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	96.7	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	105	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	98.6	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	96.4	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	97.9	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	105	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	91.7	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	103	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	99.2	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	95.4	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	97.0	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	92.9	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	102	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1828752) - continued									
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	99.0	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	98.1	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	96.9	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	101	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	96.9	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	102	80.0	120	----
Speciated Metals (QCLot: 1828403)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	99.7	80.0	120	----
Aggregate Organics (QCLot: 1828988)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	102	85.0	115	----
Volatile Organic Compounds (QCLot: 1829274)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	91.7	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	86.8	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	96.2	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	119	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	93.8	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	103	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	95.4	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	106	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	94.2	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	81.1	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	96.6	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	89.2	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	93.4	70.0	130	----
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	94.4	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	88.5	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	81.3	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	96.3	70.0	130	----



Sub-Matrix: **Water**

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Target Concentration	Recovery (%)	Recovery Limits (%)		Qualifier
					LCS	Low	High		
Volatile Organic Compounds (QCLot: 1829274) - continued									
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	99.0	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	94.9	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	92.2	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	106	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	102	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	91.8	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	95.2	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	116	60.0	140	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	109	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	97.4	70.0	130	----
Hydrocarbons (QCLot: 1829275)									
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	6310 µg/L	91.2	70.0	130	----
Hydrocarbons (QCLot: 1830929)									
EPH (C10-C19)	---	E601A	250	µg/L	6490 µg/L	85.8	70.0	130	----
EPH (C19-C32)	---	E601A	250	µg/L	3360 µg/L	85.7	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1830930)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	95.6	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	98.2	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	105	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	101	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	94.8	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	104	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	107	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	104	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	111	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	101	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	106	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	112	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	96.9	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	102	60.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1830930) - continued									
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	87.2	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	92.3	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	97.4	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	105	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	107	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	114	60.0	130	----
Glycols (QCLot: 1830136)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	94.4	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	94.5	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	92.8	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	92.8	70.0	130	----



Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1828193)										
VA24D4534-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1828194)										
VA24D4534-002	Anonymous	Chloride	16887-00-6	E235.Cl	1920 mg/L	2000 mg/L	96.2	75.0	125	----
Anions and Nutrients (QCLot: 1828195)										
VA24D4534-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	47.9 mg/L	50 mg/L	95.8	75.0	125	----
Anions and Nutrients (QCLot: 1828196)										
VA24D4534-002	Anonymous	Fluoride	16984-48-8	E235.F	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1828197)										
VA25A0021-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.44 mg/L	2.5 mg/L	97.6	75.0	125	----
Anions and Nutrients (QCLot: 1829456)										
VA24D4544-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0978 mg/L	0.1 mg/L	97.8	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1829452)										
VA24D4544-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	5.34 mg/L	5 mg/L	107	70.0	130	----
Total Sulfides (QCLot: 1830800)										
TY2500054-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.222 mg/L	0.2 mg/L	111	75.0	125	----
Total Metals (QCLot: 1828742)										
VA25A0021-007	Anonymous	Aluminum, total	7429-90-5	E420	0.195 mg/L	0.2 mg/L	97.4	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	0.0203 mg/L	0.02 mg/L	102	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0397 mg/L	0.04 mg/L	99.3	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00847 mg/L	0.01 mg/L	84.7	70.0	130	----
		Boron, total	7440-42-8	E420	0.098 mg/L	0.1 mg/L	97.5	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00390 mg/L	0.004 mg/L	97.5	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0104 mg/L	0.01 mg/L	104	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0390 mg/L	0.04 mg/L	97.5	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0187 mg/L	0.02 mg/L	93.6	70.0	130	----
		Copper, total	7440-50-8	E420	0.0183 mg/L	0.02 mg/L	91.5	70.0	130	----
		Iron, total	7439-89-6	E420	ND mg/L	----	ND	70.0	130	----
		Lead, total	7439-92-1	E420	0.0175 mg/L	0.02 mg/L	87.5	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0923 mg/L	0.1 mg/L	92.3	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	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1828742) - continued										
VA25A0021-007	Anonymous	Nickel, total	7440-02-0	E420	0.0375 mg/L	0.04 mg/L	93.7	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.2 mg/L	10 mg/L	102	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0198 mg/L	0.02 mg/L	98.9	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0407 mg/L	0.04 mg/L	102	70.0	130	----
		Silicon, total	7440-21-3	E420	ND mg/L	----	ND	70.0	130	----
		Silver, total	7440-22-4	E420	0.00388 mg/L	0.004 mg/L	96.9	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	19.9 mg/L	20 mg/L	99.3	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0413 mg/L	0.04 mg/L	103	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00356 mg/L	0.004 mg/L	89.0	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0180 mg/L	0.02 mg/L	90.2	70.0	130	----
		Tin, total	7440-31-5	E420	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0383 mg/L	0.04 mg/L	95.6	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0183 mg/L	0.02 mg/L	91.4	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00366 mg/L	0.004 mg/L	91.4	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0990 mg/L	0.1 mg/L	99.0	70.0	130	----
		Zinc, total	7440-66-6	E420	0.370 mg/L	0.4 mg/L	92.5	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0410 mg/L	0.04 mg/L	102	70.0	130	----
Total Metals (QCLot: 1832296)										
VA25A0007-004	Anonymous	Mercury, total	7439-97-6	E508	0.0000998 mg/L	0 mg/L	99.8	70.0	130	----
Dissolved Metals (QCLot: 1828752)										
VA25A0015-004	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.202 mg/L	0.2 mg/L	101	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0210 mg/L	0.02 mg/L	105	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0388 mg/L	0.04 mg/L	97.1	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00869 mg/L	0.01 mg/L	86.9	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.090 mg/L	0.1 mg/L	89.8	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00402 mg/L	0.004 mg/L	100	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0104 mg/L	0.01 mg/L	104	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0393 mg/L	0.04 mg/L	98.2	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0188 mg/L	0.02 mg/L	94.0	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0184 mg/L	0.02 mg/L	92.2	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.87 mg/L	2 mg/L	93.4	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0183 mg/L	0.02 mg/L	91.3	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0954 mg/L	0.1 mg/L	95.4	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	----	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0213 mg/L	0.02 mg/L	106	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0367 mg/L	0.04 mg/L	91.8	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
Dissolved Metals (QCLot: 1828752) - continued										
VA25A0015-004	Anonymous	Potassium, dissolved	7440-09-7	E421	3.85 mg/L	4 mg/L	96.2	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0197 mg/L	0.02 mg/L	98.6	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0407 mg/L	0.04 mg/L	102	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.91 mg/L	10 mg/L	99.1	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00192 mg/L	0.004 mg/L	48.0	70.0	130	MS-Ag
		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	0.0428 mg/L	0.04 mg/L	107	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00373 mg/L	0.004 mg/L	93.2	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0192 mg/L	0.02 mg/L	96.1	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0420 mg/L	0.04 mg/L	105	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	0.00366 mg/L	0.004 mg/L	91.5	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.102 mg/L	0.1 mg/L	102	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.384 mg/L	0.4 mg/L	96.1	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0420 mg/L	0.04 mg/L	105	70.0	130	----
Dissolved Metals (QCLot: 1832332)										
VA25A0007-003	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000987 mg/L	0 mg/L	98.7	70.0	130	----
Speciated Metals (QCLot: 1828403)										
VA24D4533-022	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.253 mg/L	0.25 mg/L	101	70.0	130	----
Aggregate Organics (QCLot: 1828988)										
VA24D4413-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0211 mg/L	0.02 mg/L	106	75.0	125	----
Volatile Organic Compounds (QCLot: 1829274)										
VA24D4388-002	Anonymous	Benzene	71-43-2	E611C	ND µg/L	----	ND	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	88.6 µg/L	100 µg/L	88.6	60.0	140	----
		Bromoform	75-25-2	E611C	95.0 µg/L	100 µg/L	95.0	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Chlorobenzene	108-90-7	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Chloroethane	75-00-3	E611C	111 µg/L	100 µg/L	111	50.0	150	----
		Chloroform	67-66-3	E611C	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Chloromethane	74-87-3	E611C	90.0 µg/L	100 µg/L	90.0	50.0	150	----
		Dibromochloromethane	124-48-1	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611C	92.6 µg/L	100 µg/L	92.6	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	82.3 µg/L	100 µg/L	82.3	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	90.9 µg/L	100 µg/L	90.9	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	90.2 µg/L	100 µg/L	90.2	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	93.3 µg/L	100 µg/L	93.3	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
Volatile Organic Compounds (QCLot: 1829274) - continued										
VA24D4388-002	Anonymous	Dichloromethane	75-09-2	E611C	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	89.1 µg/L	100 µg/L	89.1	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	84.6 µg/L	100 µg/L	84.6	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	98.7 µg/L	100 µg/L	98.7	60.0	140	----
		Ethylbenzene	100-41-4	E611C	ND µg/L	----	ND	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	97.5 µg/L	100 µg/L	97.5	60.0	140	----
		Styrene	100-42-5	E611C	92.2 µg/L	100 µg/L	92.2	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	90.1 µg/L	100 µg/L	90.1	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	108 µg/L	100 µg/L	108	60.0	140	----
		Toluene	108-88-3	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	93.8 µg/L	100 µg/L	93.8	60.0	140	----
		Trichloroethylene	79-01-6	E611C	94.9 µg/L	100 µg/L	94.9	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	108 µg/L	100 µg/L	108	50.0	150	----
		Vinyl chloride	75-01-4	E611C	96.9 µg/L	100 µg/L	96.9	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	219 µg/L	200 µg/L	109	60.0	140	----
		Xylene, o-	95-47-6	E611C	95.9 µg/L	100 µg/L	95.9	60.0	140	----
Hydrocarbons (QCLot: 1829275)										
VA24D4482-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	5290 µg/L	6310 µg/L	83.8	60.0	140	----

Qualifiers

Qualifier

Description

MS-Ag

MS-Ag: Matrix Spike recovery for silver was marginally below DQO (40 to <60%) due to its instability in the sample matrix. Silver was not detected. Reported result (< LOR) is reliable

CERTIFICATE OF ANALYSIS

Work Order : **VA25A0056**
Client : **Triton Environmental Consultants Ltd.**
Contact
Address
Telephone
Project : 11964
PO : 11964 - Task 40 - Phase 3C-4C
C-O-C number : ----
Sampler : ----
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 : 02-Jan-2025 14:20
Date Analysis Commenced : 03-Jan-2025
Issue Date : 10-Jan-2025 09:07

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.

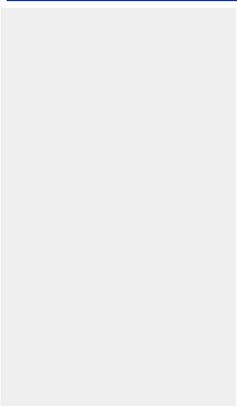
This Certificate of Analysis contains the following information:

- 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>
	Laboratory Analyst	Inorganics, Edmonton, Alberta
	Laboratory Analyst	Metals, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
	Supervisor - Organics Instrumentation	Organics, Burnaby, British Columbia
	Department Manager - Metals	Metals, Burnaby, British Columbia
	Supervisor - Water Chemistry	Inorganics, Burnaby, British Columbia
	Analyst- General	Inorganics, Burnaby, British Columbia
	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
	Account Manager Assistant	Administration, Burnaby, British Columbia
	Analyst- General	Metals, Burnaby, British Columbia
	Analyst- General	Organics, Burnaby, British Columbia



General Comments

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

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

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

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

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

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

<: less than.

>: greater than.

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

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

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

Qualifiers

<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	WLNG EOP	----	----	----
Client sampling date / time					02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm	163.00	180.20	----	----	----	
pH, field	----	EF001/VA	0.10	pH units	7.80	7.28	----	----	----	
Temperature, field	----	EF001/VA	0.10	°C	9.50	9.10	----	----	----	
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L	53.6	57.8	----	----	----	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	60.9	56.2	----	----	----	
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	86	90	----	----	----	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	<3.0	----	----	----	
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	57.9	57.2	----	----	----	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0154	0.0240	----	----	----	
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	5.78	6.64	----	----	----	
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.200	0.202	----	----	----	
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.0207	0.0200	----	----	----	
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	0.244	0.272	----	----	----	
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0280	0.0032	----	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	6.17	6.35	----	----	----	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	<0.50	<0.50	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	WLNQ EOP	----	----	----
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	<0.0015	----	----	----	
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	<0.0015	----	----	----	
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	<0.0016	----	----	----	
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0361	0.0415	----	----	----	
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	0.00076	0.00026	----	----	----	
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00135	0.00127	----	----	----	
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00394	0.00376	----	----	----	
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L	<0.000100	<0.000100	----	----	----	
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Boron, total	7440-42-8	E420/VA	0.010	mg/L	0.015	0.014	----	----	----	
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000100 ^{DLM}	<0.0000100 ^{DLM}	----	----	----	
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	22.7	20.8	----	----	----	
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000021	0.000019	----	----	----	
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	0.00078	0.00228	----	----	----	
Iron, total	7439-89-6	E420/VA	0.010	mg/L	<0.010	<0.010	----	----	----	
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000212	0.000469	----	----	----	
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0055	0.0038	----	----	----	
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	1.03	1.04	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	WLNG EOP	----	----	----
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00489	0.00392	----	----	----	
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	0.0209	0.0200	----	----	----	
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	1.80	1.42	----	----	----	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00296	0.00244	----	----	----	
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	0.000065	0.000065	----	----	----	
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	6.34	5.74	----	----	----	
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	5.08	5.24	----	----	----	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0454	0.0459	----	----	----	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	2.18	2.30	----	----	----	
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L	0.000013	0.000011	----	----	----	
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	<0.00030	<0.00030	----	----	----	
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	0.00077	0.00061	----	----	----	
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.00363	0.00396	----	----	----	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	WLNQ EOP	---	---	---
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	---	---	---	
					Result	Result	---	---	---	
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	0.0233	0.0323	---	---	---	
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	<0.00020	---	---	---	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0201	0.0177	---	---	---	
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	0.00066	0.00023	---	---	---	
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	0.00115	0.00112	---	---	---	
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00392	0.00372	---	---	---	
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	0.015	0.014	---	---	---	
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000100 ^{DLM}	<0.0000100 ^{DLM}	---	---	---	
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	19.8	21.5	---	---	---	
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	0.000019	0.000018	---	---	---	
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	0.00070	0.00184	---	---	---	
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	<0.010	<0.010	---	---	---	
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	0.000160	0.000378	---	---	---	
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	0.0050	0.0040	---	---	---	
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	1.02	1.00	---	---	---	
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00489	0.00363	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	WLNG EOP	----	----	----
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L	<0.0000050	<0.0000050	----	----	----	
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	0.0188	0.0192	----	----	----	
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	1.79	1.41	----	----	----	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00311	0.00232	----	----	----	
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	0.000077	0.000071	----	----	----	
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	5.65	5.64	----	----	----	
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	4.96	4.93	----	----	----	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0405	0.0459	----	----	----	
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	2.21	2.20	----	----	----	
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	0.00071	0.00061	----	----	----	
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L	0.00335	0.00393	----	----	----	
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	0.0220	0.0303	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	WLNQ EOP	----	----	----
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	Field	----	----	----	
Dissolved metals filtration location	----	EP421/VA	-	-	Field	Field	----	----	----	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Aggregate Organics										
Phenols, total (4AAP)	----	E562/EO	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Volatile Organic Compounds										
Chlorobenzene	108-90-7	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Chloromethane	74-87-3	E611C/VA	5.0	µg/L	<5.0	<5.0	----	----	----	
Dichlorobenzene, 1,2-	95-50-1	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichlorobenzene, 1,3-	541-73-1	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichlorobenzene, 1,4-	106-46-7	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloropropane, 1,2-	78-87-5	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloropropylene, cis-1,3-	10061-01-5	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloropropylene, cis+trans-1,3-	542-75-6	E611C/VA	0.75	µg/L	<0.75	<0.75	----	----	----	
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C/VA	0.20	µg/L	<0.20	<0.20	----	----	----	
Trichloroethane, 1,1,2-	79-00-5	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Trichlorofluoromethane	75-69-4	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	WLNQ EOP	----	----	----
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Volatile Organic Compounds [Drycleaning]										
Carbon tetrachloride	56-23-5	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Chloroethane	75-00-3	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloroethane, 1,1-	75-34-3	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloroethane, 1,2-	107-06-2	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloroethylene, 1,1-	75-35-4	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloroethylene, cis-1,2-	156-59-2	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloroethylene, trans-1,2-	156-60-5	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloromethane	75-09-2	E611CVA	1.0	µg/L	<1.0	<1.0	----	----	----	
Dichloropropylene, trans-1,3-	10061-02-6	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Tetrachloroethylene	127-18-4	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Trichloroethane, 1,1,1-	71-55-6	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Trichloroethylene	79-01-6	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Vinyl chloride	75-01-4	E611CVA	0.40	µg/L	<0.40	<0.40	----	----	----	
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Ethylbenzene	100-41-4	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Styrene	100-42-5	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Toluene	108-88-3	E611CVA	0.40	µg/L	<0.40	<0.40	----	----	----	
Xylene, m+p-	179601-23-1	E611CVA	0.40	µg/L	<0.40	<0.40	----	----	----	
Xylene, o-	95-47-6	E611CVA	0.30	µg/L	<0.30	<0.30	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	WLNG EOP	----	----	----
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Volatile Organic Compounds [Fuels]										
Xylenes, total	1330-20-7	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Volatile Organic Compounds [THMs]										
Bromodichloromethane	75-27-4	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Bromoform	75-25-2	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Chloroform	67-66-3	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dibromochloromethane	124-48-1	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Hydrocarbons										
EPH (C10-C19)	----	E601A/VA	250	µg/L	<250	<250	----	----	----	
EPH (C19-C32)	----	E601A/VA	250	µg/L	<250	<250	----	----	----	
VHw (C6-C10)	----	E581.VH+F1/V A	100	µg/L	<100	<100	----	----	----	
HEPHw	----	EC600A/VA	250	µg/L	<250	<250	----	----	----	
LEPHw	----	EC600A/VA	250	µg/L	<250	<250	----	----	----	
VPHw	----	EC580A/VA	100	µg/L	<100	<100	----	----	----	
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%	90.3	91.5	----	----	----	
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/V A	1.0	%	107	98.6	----	----	----	
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%	81.5	85.0	----	----	----	
Difluorobenzene, 1,4-	540-36-3	E611C/VA	1.0	%	99.6	102	----	----	----	
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	WLNG EOP	----	----	----
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Acridine	260-94-6	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Anthracene	120-12-7	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L	<0.0050	<0.0050	----	----	----	
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L	<0.015	<0.015	----	----	----	
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Chrysene	218-01-9	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L	<0.0050	<0.0050	----	----	----	
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Fluorene	86-73-7	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L	0.018	<0.010	----	----	----	
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L	0.018	<0.010	----	----	----	
Naphthalene	91-20-3	E641A/VA	0.050	µg/L	<0.050	<0.050	----	----	----	
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L	<0.020	<0.020	----	----	----	
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	<0.050	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	WLNQ EOP	---	---	---
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	---	---	---	
					Result	Result	---	---	---	
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	86.1	88.2	---	---	---	
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	92.7	84.3	---	---	---	
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	88.7	80.5	---	---	---	
Glycols										
Diethylene glycol	111-46-6	E680E/VA	5.0	mg/L	<5.0	<5.0	---	---	---	
Ethylene glycol	107-21-1	E680E/VA	5.0	mg/L	<5.0	<5.0	---	---	---	
Propylene glycol, 1,2-	57-55-6	E680E/VA	5.0	mg/L	<5.0	<5.0	---	---	---	
Triethylene glycol	112-27-6	E680E/VA	5.0	mg/L	<5.0	<5.0	---	---	---	
Glycols, total (EG+DEG+PG)	---	E680E/VA	10	mg/L	<10	<10	---	---	---	
Glycols Surrogates										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%	95.9	96.6	---	---	---	

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

QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : VA25A0056</p> <p>Client : Triton Environmental Consultants Ltd.</p> <p>Contact : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Project : 11964</p> <p>PO : 11964 - Task 40 - Phase 3C-4C</p> <p>C-O-C number : ----</p> <p>Sampler : ----</p> <p>Site : Water Analysis</p> <p>Quote number : VA23-TRIT100-012_V2</p> <p>No. of samples received : 2</p> <p>No. of samples analysed : 2</p>	<p>Page : 1 of 18</p> <p>Laboratory : ALS Environmental - Vancouver</p> <p>Account Manager : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Date Samples Received : 02-Jan-2025 14:20</p> <p>Issue Date : 10-Jan-2025 09:06</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
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Boron, dissolved	7440-42-8	E421	135 % ^{MES}	70.0-130%	Recovery greater than upper data quality objective
Dissolved Metals	Anonymous	Anonymous	Molybdenum, dissolved	7439-98-7	E421	134 % ^{MES}	70.0-130%	Recovery greater than upper data quality objective

Result Qualifiers

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



Analysis Holding Time Compliance

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

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

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

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

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry											
Amber glass total (sulfuric acid) WLNG EOP	E562	02-Jan-2025	07-Jan-2025	28 days	5 days	✔	07-Jan-2025	28 days	5 days	✔	
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry											
Amber glass total (sulfuric acid) WLNG EOP	E562	01-Jan-2025	07-Jan-2025	28 days	6 days	✔	07-Jan-2025	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) WLNG EOP	E298	02-Jan-2025	04-Jan-2025	28 days	2 days	✔	06-Jan-2025	28 days	4 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) WLNG EOP	E298	01-Jan-2025	04-Jan-2025	28 days	3 days	✔	06-Jan-2025	28 days	5 days	✔	
Anions and Nutrients : Bromide in Water by IC (Low Level)											
HDPE WLNG EOP	E235.Br-L	02-Jan-2025	03-Jan-2025	28 days	1 days	✔	03-Jan-2025	28 days	1 days	✔	
Anions and Nutrients : Bromide in Water by IC (Low Level)											
HDPE WLNG EOP	E235.Br-L	01-Jan-2025	03-Jan-2025	28 days	2 days	✔	03-Jan-2025	28 days	2 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE WLNG EOP	E235.Cl	02-Jan-2025	03-Jan-2025	28 days	1 days	✔	03-Jan-2025	28 days	1 days	✔	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Chloride in Water by IC											
HDPE WLNG EOP	E235.Cl	01-Jan-2025	03-Jan-2025	28 days	2 days	✓	03-Jan-2025	28 days	2 days	✓	
Anions and Nutrients : Fluoride in Water by IC											
HDPE WLNG EOP	E235.F	02-Jan-2025	03-Jan-2025	28 days	1 days	✓	03-Jan-2025	28 days	1 days	✓	
Anions and Nutrients : Fluoride in Water by IC											
HDPE WLNG EOP	E235.F	01-Jan-2025	03-Jan-2025	28 days	2 days	✓	03-Jan-2025	28 days	2 days	✓	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO3-L	02-Jan-2025	03-Jan-2025	3 days	1 days	✓	03-Jan-2025	3 days	1 days	✓	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO3-L	01-Jan-2025	03-Jan-2025	3 days	2 days	✓	03-Jan-2025	3 days	2 days	✓	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO2-L	02-Jan-2025	03-Jan-2025	3 days	1 days	✓	03-Jan-2025	3 days	1 days	✓	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO2-L	01-Jan-2025	03-Jan-2025	3 days	2 days	✓	03-Jan-2025	3 days	2 days	✓	
Anions and Nutrients : Sulfate in Water by IC											
HDPE WLNG EOP	E235.SO4	02-Jan-2025	03-Jan-2025	28 days	1 days	✓	03-Jan-2025	28 days	1 days	✓	
Anions and Nutrients : Sulfate in Water by IC											
HDPE WLNG EOP	E235.SO4	01-Jan-2025	03-Jan-2025	28 days	2 days	✓	03-Jan-2025	28 days	2 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Total Nitrogen by Colourimetry											
Amber glass total (sulfuric acid) WLNG EOP	E366	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	05-Jan-2025	28 days	3 days	✓	
Anions and Nutrients : Total Nitrogen by Colourimetry											
Amber glass total (sulfuric acid) WLNG EOP	E366	01-Jan-2025	04-Jan-2025	28 days	3 days	✓	05-Jan-2025	28 days	4 days	✓	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)											
Amber glass total (sulfuric acid) WLNG EOP	E372-U	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	07-Jan-2025	28 days	5 days	✓	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)											
Amber glass total (sulfuric acid) WLNG EOP	E372-U	01-Jan-2025	04-Jan-2025	28 days	3 days	✓	07-Jan-2025	28 days	6 days	✓	
Dissolved Metals : Dissolved Mercury in Water by CVAAS											
Glass vial - dissolved (lab preserved) WLNG EOP	E509	02-Jan-2025	09-Jan-2025	28 days	7 days	✓	09-Jan-2025	28 days	7 days	✓	
Dissolved Metals : Dissolved Mercury in Water by CVAAS											
Glass vial dissolved (hydrochloric acid) WLNG EOP	E509	01-Jan-2025	09-Jan-2025	28 days	8 days	✓	09-Jan-2025	28 days	8 days	✓	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE - dissolved (lab preserved) WLNG EOP	E421	02-Jan-2025	07-Jan-2025	180 days	5 days	✓	09-Jan-2025	180 days	7 days	✓	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) WLNG EOP	E421	01-Jan-2025	07-Jan-2025	180 days	6 days	✓	09-Jan-2025	180 days	8 days	✓	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine											
Glass vial - dissolved (lab preserved) WLNG EOP	EF001	02-Jan-2025	----	----	----		03-Jan-2025	----	1 days		



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine											
Glass vial dissolved (hydrochloric acid) WLNG EOP	EF001	01-Jan-2025	----	----	----		03-Jan-2025	----	2 days		
Glycols : Glycols (4 analytes) by GC-FID											
Glass vial WLNG EOP	E680E	02-Jan-2025	05-Jan-2025	7 days	3 days	✓	06-Jan-2025	40 days	1 days	✓	
Glycols : Glycols (4 analytes) by GC-FID											
Glass vial WLNG EOP	E680E	01-Jan-2025	05-Jan-2025	7 days	4 days	✓	06-Jan-2025	40 days	1 days	✓	
Hydrocarbons : BC PHCs - EPH by GC-FID											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E601A	02-Jan-2025	07-Jan-2025	14 days	5 days	✓	09-Jan-2025	40 days	2 days	✓	
Hydrocarbons : BC PHCs - EPH by GC-FID											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E601A	01-Jan-2025	07-Jan-2025	14 days	6 days	✓	09-Jan-2025	40 days	2 days	✓	
Hydrocarbons : VH and F1 by Headspace GC-FID											
Glass vial (sodium bisulfate) WLNG EOP	E581.VH+F1	02-Jan-2025	04-Jan-2025	14 days	2 days	✓	04-Jan-2025	14 days	2 days	✓	
Hydrocarbons : VH and F1 by Headspace GC-FID											
Glass vial (sodium bisulfate) WLNG EOP	E581.VH+F1	01-Jan-2025	04-Jan-2025	14 days	3 days	✓	04-Jan-2025	14 days	3 days	✓	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)											
Amber glass dissolved (sulfuric acid) WLNG EOP	E358-L	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	04-Jan-2025	28 days	2 days	✓	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)											
Amber glass dissolved (sulfuric acid) WLNG EOP	E358-L	01-Jan-2025	04-Jan-2025	28 days	3 days	✓	04-Jan-2025	28 days	3 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : Alkalinity Species by Titration											
HDPE WLNG EOP	E290	02-Jan-2025	03-Jan-2025	14 days	1 days	✓	03-Jan-2025	14 days	1 days	✓	
Physical Tests : Alkalinity Species by Titration											
HDPE WLNG EOP	E290	01-Jan-2025	03-Jan-2025	14 days	2 days	✓	03-Jan-2025	14 days	2 days	✓	
Physical Tests : TDS by Gravimetry											
HDPE WLNG EOP	E162	02-Jan-2025	----	----	----		05-Jan-2025	7 days	3 days	✓	
Physical Tests : TDS by Gravimetry											
HDPE WLNG EOP	E162	01-Jan-2025	----	----	----		05-Jan-2025	7 days	4 days	✓	
Physical Tests : TSS by Gravimetry											
HDPE WLNG EOP	E160	02-Jan-2025	----	----	----		05-Jan-2025	7 days	3 days	✓	
Physical Tests : TSS by Gravimetry											
HDPE WLNG EOP	E160	01-Jan-2025	----	----	----		05-Jan-2025	7 days	4 days	✓	
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	02-Jan-2025	07-Jan-2025	14 days	5 days	✓	07-Jan-2025	40 days	1 days	✓	
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	01-Jan-2025	07-Jan-2025	14 days	6 days	✓	07-Jan-2025	40 days	1 days	✓	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC											
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	02-Jan-2025	----	----	----		04-Jan-2025	28 days	2 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	01-Jan-2025	----	----	----		04-Jan-2025	28 days	3 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial - total (lab preserved) WLNG EOP	E508	02-Jan-2025	09-Jan-2025	28 days	7 days	✓	09-Jan-2025	28 days	7 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG EOP	E508	01-Jan-2025	09-Jan-2025	28 days	8 days	✓	09-Jan-2025	28 days	8 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) WLNG EOP	E420	02-Jan-2025	07-Jan-2025	180 days	5 days	✓	09-Jan-2025	180 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG EOP	E420	01-Jan-2025	07-Jan-2025	180 days	6 days	✓	09-Jan-2025	180 days	8 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	02-Jan-2025	----	----	----		06-Jan-2025	7 days	4 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	01-Jan-2025	----	----	----		06-Jan-2025	7 days	5 days	✓
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate) WLNG EOP	E611C	02-Jan-2025	04-Jan-2025	14 days	2 days	✓	04-Jan-2025	14 days	2 days	✓
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate) WLNG EOP	E611C	01-Jan-2025	04-Jan-2025	14 days	3 days	✓	04-Jan-2025	14 days	3 days	✓

[Legend & Qualifier Definitions](#)

Page : 10 of 18
Work Order : VA25A0056
Client : Triton Environmental Consultants Ltd.
Project : 11964



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
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1829113	1	18	5.5	5.0	✓
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✓
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✓
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1831307	1	15	6.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1829113	1	18	5.5	5.0	✓
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1831206	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✓
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✓
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	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
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
PAHs in Water by Hexane LVI GC-MS	E641A	1831207	1	14	7.1	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1831307	1	15	6.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1829113	1	18	5.5	5.0	✓
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1831206	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✓
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✓
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1831207	1	14	7.1	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1831307	1	15	6.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	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>							
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✔
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1831307	1	15	6.6	5.0	✔
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	5.0	✔



Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$, 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 ₂ . 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 ₂ S" if reported represent the maximum possible H ₂ S concentration based on the total sulfide concentration in the sample. The H ₂ S calculation converts Total Sulphide as (S ₂ ⁻) and reports it as Total Sulphide as (H ₂ 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 ₃ Fe(CN) ₆) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
VH and F1 by Headspace GC-FID	E581.VH+F1 ALS Environmental - Vancouver	Water	BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod)	Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
BC PHCs - EPH by GC-FID	E601A ALS Environmental - Vancouver	Water	BC MOE Lab Manual	Sample extracts are analyzed by GC-FID for BC hydrocarbon fractions.
VOCs (BC List) by Headspace GC-MS	E611C ALS Environmental - Vancouver	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Total Xylenes is the sum of m,p-Xylene & o-Xylene. Total BTEX is the sum of Benzene, Toluene, Ethylbenzene, & Total Xylenes. Total BTEX+Styrene is the sum of Total BTEX & Styrene. Total Trihalomethanes [THMs] is the sum of Bromodichloromethane, Bromoform, Chloroform, & Dibromochloromethane.
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Vancouver	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
Glycols (4 analytes) by GC-FID	E680E ALS Environmental - Vancouver	Water	EPA 8015D (mod)	Derivatized glycols are analyzed by GC-FID.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. 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 ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ ,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ 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 ₃ .
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 : **VA25A0056**
Client : Triton Environmental Consultants Ltd.
Contact :
Address :

Telephone :
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 : 2
No. of samples analysed : 2

Page : 1 of 23
Laboratory : ALS Environmental - Vancouver
Account Manager :
Address :

Telephone :
Date Samples Received : 02-Jan-2025 14:20
Date Analysis Commenced : 03-Jan-2025
Issue Date : 10-Jan-2025 09:07

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
	Laboratory Analyst	Edmonton Inorganics, Edmonton, Alberta
	Laboratory Analyst	Vancouver Metals, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
	Supervisor - Organics Instrumentation	Vancouver Organics, Burnaby, British Columbia
	Department Manager - Metals	Vancouver Metals, Burnaby, British Columbia
	Supervisor - Water Chemistry	Vancouver Inorganics, Burnaby, British Columbia
	Analyst- General	Vancouver Inorganics, Burnaby, British Columbia
	Department Manager - Inorganics	Vancouver Inorganics, Burnaby, British Columbia
	Account Manager Assistant	Vancouver Administration, Burnaby, British Columbia
	Analyst- General	Vancouver Metals, Burnaby, British Columbia
	Analyst- General	Vancouver Organics, Burnaby, British Columbia

Page : 2 of 23
Work Order : VA25A0056
Client : Triton Environmental Consultants Ltd.
Project : 11964



General Comments

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

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1829113)											
VA24D4448-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	152	153	0.523%	20%	----
Physical Tests (QC Lot: 1830076)											
VA24D4481-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1830078)											
VA24D4481-001	Anonymous	Solids, total dissolved [TDS]	----	E162	13	mg/L	44	48	4	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829115)											
VA24D4448-001	Anonymous	Fluoride	16984-48-8	E235.F	0.334	mg/L	<0.334	<0.334	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829116)											
VA24D4448-001	Anonymous	Chloride	16887-00-6	E235.Cl	2.50	mg/L	41.9	40.8	2.72%	20%	----
Anions and Nutrients (QC Lot: 1829117)											
VA24D4448-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.250	mg/L	<0.250	<0.250	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829118)											
VA24D4448-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0250	mg/L	31.1	30.4	2.52%	20%	----
Anions and Nutrients (QC Lot: 1829119)											
VA24D4448-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0050	mg/L	1.52	1.50	1.48%	20%	----
Anions and Nutrients (QC Lot: 1829120)											
VA24D4448-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	166	162	2.87%	20%	----
Anions and Nutrients (QC Lot: 1829970)											
FJ2500001-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.300	mg/L	12.2	12.0	1.51%	20%	----
Anions and Nutrients (QC Lot: 1829971)											
FJ2500001-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0400	mg/L	5.86	5.93	1.31%	20%	----
Anions and Nutrients (QC Lot: 1829972)											
FJ2500001-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.500	mg/L	10.4	10.5	0.832%	20%	----
Organic / Inorganic Carbon (QC Lot: 1829973)											
VA25A0056-001	WLNG EOP	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Total Sulfides (QC Lot: 1830800)											
TY2500054-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0257	0.0247	4.09%	20%	----
Total Metals (QC Lot: 1830423)											
VA25A0056-001	WLNG EOP	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0361	0.0382	5.87%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00076	0.00074	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
Total Metals (QC Lot: 1830423) - continued											
VA25A0056-001	WLNG EOP	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00135	0.00128	4.88%	20%	---
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.00394	0.00399	1.41%	20%	---
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	---
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Boron, total	7440-42-8	E420	0.010	mg/L	0.015	0.015	0.0002	Diff <2x LOR	---
		Cadmium, total	7440-43-9	E420	0.0000100	mg/L	<0.0000100	<0.0000100	0	Diff <2x LOR	---
		Calcium, total	7440-70-2	E420	0.050	mg/L	22.7	21.7	4.67%	20%	---
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000021	0.000019	0.000002	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	<0.00010	<0.00010	0	Diff <2x LOR	---
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00078	0.00076	0.00001	Diff <2x LOR	---
		Iron, total	7439-89-6	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000212	0.000212	0.0000004	Diff <2x LOR	---
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0055	0.0055	0.00004	Diff <2x LOR	---
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.03	1.03	0.243%	20%	---
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00489	0.00492	0.539%	20%	---
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.0209	0.0209	0.137%	20%	---
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	---
		Potassium, total	7440-09-7	E420	0.050	mg/L	1.80	1.81	0.474%	20%	---
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00296	0.00293	0.852%	20%	---
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000065	0.000074	0.000009	Diff <2x LOR	---
		Silicon, total	7440-21-3	E420	0.10	mg/L	6.34	6.19	2.38%	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	5.08	5.20	2.49%	20%	---
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0454	0.0441	3.01%	20%	---
		Sulfur, total	7704-34-9	E420	0.50	mg/L	2.18	2.11	0.07	Diff <2x LOR	---
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000013	0.000011	0.000001	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	0.00077	0.00076	0.000008	Diff <2x LOR	---
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00363	0.00361	0.424%	20%	---



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1830423) - continued											
VA25A0056-001	WLNQ EOP	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	0.0233	0.0226	0.0007	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1834290)											
KS2405395-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	0.0000125	0.0000154	0.0000029	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1830436)											
FJ2500013-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.128	0.130	1.87%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00050	0.00049	0.000003	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00060	0.00057	0.00002	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0748	0.0781	4.24%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.104	0.099	5.20%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.000250	0.000263	5.23%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	66.8	65.3	2.30%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	0.000010	0.0000005	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	0.0119	0.0124	4.33%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00068	0.00071	0.00004	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	0.0569	0.0544	4.62%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	23.4	25.0	6.71%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.244	0.251	2.94%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00515	0.00512	0.441%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0387	0.0399	3.16%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	2.82	3.00	6.31%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00289	0.00311	7.16%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000686	0.000736	6.99%	20%	----
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.10	3.00	3.42%	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	131	133	1.66%	20%	----		
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.347	0.340	2.04%	20%	----		



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1830436) - continued											
FJ2500013-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	118	114	3.17%	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	0.000012	0.000012	0.0000004	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	0.00031	0.00029	0.00002	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00190	0.00189	0.792%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	0.00076	0.00076	0.000004	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0167	0.0171	1.95%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1834048)											
VA25A0056-001	WLNG EOP	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1829684)											
VA25A0056-001	WLNG EOP	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1831307)											
CG2500037-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1829686)											
VA25A0056-001	WLNG EOP	Benzene	71-43-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611C	5.0	µg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1829686) - continued											
VA25A0056-001	WLNQ EOP	Dichloroethylene, trans-1,2-	156-60-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611C	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
Xylene, o-	95-47-6	E611C	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----		
Hydrocarbons (QC Lot: 1829685)											
VA25A0056-001	WLNQ EOP	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1830136)											
VA25A0023-001	Anonymous	Diethylene glycol	111-46-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Ethylene glycol	107-21-1	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Propylene glycol, 1,2-	57-55-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Triethylene glycol	112-27-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----



Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1829113)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1830076)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1830078)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1829115)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1829116)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1829117)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1829118)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1829119)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1829120)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1829970)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1829971)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1829972)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 1829973)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1830800)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1830423)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1830423) - continued						
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1834290)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1830436)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1830436) - continued						
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1834048)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1829684)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1831307)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1829686)						
Benzene	71-43-2	E611C	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611C	0.5	µg/L	<0.50	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	<0.50	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611C	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611C	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611C	5	µg/L	<5.0	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611C	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	<0.50	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1829686) - continued						
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	<0.50	---
Styrene	100-42-5	E611C	0.5	µg/L	<0.50	---
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	<0.50	---
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	<0.20	---
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	<0.50	---
Toluene	108-88-3	E611C	0.4	µg/L	<0.40	---
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	<0.50	---
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	<0.50	---
Trichloroethylene	79-01-6	E611C	0.5	µg/L	<0.50	---
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	<0.50	---
Vinyl chloride	75-01-4	E611C	0.4	µg/L	<0.40	---
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	<0.40	---
Xylene, o-	95-47-6	E611C	0.3	µg/L	<0.30	---
Hydrocarbons (QCLot: 1829685)						
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	<100	---
Hydrocarbons (QCLot: 1831206)						
EPH (C10-C19)	---	E601A	250	µg/L	<250	---
EPH (C19-C32)	---	E601A	250	µg/L	<250	---
Polycyclic Aromatic Hydrocarbons (QCLot: 1831207)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	---
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	---
Acridine	260-94-6	E641A	0.01	µg/L	<0.010	---
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	---
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	---
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	---
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	---
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	---
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	---
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	---
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	---
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	---
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	---
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	---
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	---
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	---



Sub-Matrix: **Water**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
Polycyclic Aromatic Hydrocarbons (QCLot: 1831207) - continued						
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A	0.05	µg/L	<0.050	----
Glycols (QCLot: 1830136)						
Diethylene glycol	111-46-6	E680E	5	mg/L	<5.0	----
Ethylene glycol	107-21-1	E680E	5	mg/L	<5.0	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	<5.0	----
Triethylene glycol	112-27-6	E680E	5	mg/L	<5.0	----



Laboratory Control Sample (LCS) Report

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

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1829113)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	106	85.0	115	----
Physical Tests (QCLot: 1830076)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	99.7	85.0	115	----
Physical Tests (QCLot: 1830078)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	98.6	85.0	115	----
Anions and Nutrients (QCLot: 1829115)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1829116)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1829117)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	105	85.0	115	----
Anions and Nutrients (QCLot: 1829118)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1829119)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1829120)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 1829970)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1829971)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	95.1	80.0	120	----
Anions and Nutrients (QCLot: 1829972)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	92.7	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1829973)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	98.6	80.0	120	----
Total Sulfides (QCLot: 1830800)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	103	80.0	120	----
Total Metals (QCLot: 1830423)									



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830423) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	100	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	100.0	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	98.5	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	97.8	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	102	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	98.7	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	97.7	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	95.5	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	95.4	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	98.8	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	94.3	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	99.0	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	95.5	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.7	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	99.2	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	99.8	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	100	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	100	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	110	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	87.7	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	99.5	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	92.5	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	100	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	94.6	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	98.1	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	95.1	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	98.6	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	96.8	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	97.6	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830423) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	94.5	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	92.1	80.0	120	----
Total Metals (QCLot: 1834290)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	83.2	80.0	120	----
Dissolved Metals (QCLot: 1830436)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	97.5	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	104	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	98.1	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	96.9	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	96.2	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	99.3	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	97.7	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	98.6	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	98.9	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	97.4	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	93.9	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	96.9	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	106	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	98.8	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	103	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	96.0	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	104	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	96.8	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	98.0	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	106	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	90.2	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	106	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	104	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	96.7	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1830436) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	98.3	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	102	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	82.4	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	102	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	99.8	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	99.1	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	99.9	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	99.8	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	99.2	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	81.5	80.0	120	----
Speciated Metals (QCLot: 1829684)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	99.4	80.0	120	----
Aggregate Organics (QCLot: 1831307)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	104	85.0	115	----
Volatile Organic Compounds (QCLot: 1829686)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	89.7	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	89.4	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	97.8	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	94.2	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	97.0	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	112	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	92.7	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	98.7	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	97.1	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	97.2	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	100	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	100 µg/L	92.3	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	87.2	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	89.8	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	88.2	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	91.4	70.0	130	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1829686) - continued									
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	97.3	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	90.8	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	88.9	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	93.7	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	92.8	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	97.6	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	96.4	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	96.9	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	94.6	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	98.0	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	90.6	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	103	60.0	140	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	101	60.0	140	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	200 µg/L	100	70.0	130	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	91.0	70.0	130	----
Hydrocarbons (QCLot: 1829685)									
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	6310 µg/L	75.8	70.0	130	----
Hydrocarbons (QCLot: 1831206)									
EPH (C10-C19)	---	E601A	250	µg/L	6490 µg/L	105	70.0	130	----
EPH (C19-C32)	---	E601A	250	µg/L	3360 µg/L	108	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1831207)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	90.2	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	95.0	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	106	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	103	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	116	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	102	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	97.5	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	106	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	96.2	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	106	60.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1831207) - continued									
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	109	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	107	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	93.3	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	116	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	77.6	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	87.0	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	89.9	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	107	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	106	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	116	60.0	130	----
Glycols (QCLot: 1830136)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	94.4	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	94.5	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	92.8	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	92.8	70.0	130	----



Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1829115)										
VA24D4448-002	Anonymous	Fluoride	16984-48-8	E235.F	4.94 mg/L	5 mg/L	98.7	75.0	125	----
Anions and Nutrients (QCLot: 1829116)										
VA24D4448-002	Anonymous	Chloride	16887-00-6	E235.Cl	504 mg/L	500 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1829117)										
VA24D4448-002	Anonymous	Bromide	24959-67-9	E235.Br-L	2.61 mg/L	2.5 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1829118)										
VA24D4448-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1829119)										
VA24D4448-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.51 mg/L	2.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1829120)										
VA24D4448-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	501 mg/L	500 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1829970)										
KS2405390-001	Anonymous	Nitrogen, total	7727-37-9	E366	1.84 mg/L	2 mg/L	92.2	70.0	130	----
Anions and Nutrients (QCLot: 1829971)										
KS2405389-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1829972)										
VA25A0056-001	WLNG EOP	Ammonia, total (as N)	7664-41-7	E298	0.104 mg/L	0.1 mg/L	104	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1829973)										
VA25A0056-002	WLNG EOP	Carbon, dissolved organic [DOC]	----	E358-L	5.28 mg/L	5 mg/L	106	70.0	130	----
Total Sulfides (QCLot: 1830800)										
TY2500054-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.222 mg/L	0.2 mg/L	111	75.0	125	----
Total Metals (QCLot: 1830423)										
VA25A0056-002	WLNG EOP	Aluminum, total	7429-90-5	E420	0.187 mg/L	0.2 mg/L	93.3	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0195 mg/L	0.02 mg/L	97.5	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Barium, total	7440-39-3	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0383 mg/L	0.04 mg/L	95.8	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0100 mg/L	0.01 mg/L	100	70.0	130	----
		Boron, total	7440-42-8	E420	0.096 mg/L	0.1 mg/L	96.5	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00403 mg/L	0.004 mg/L	101	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00985 mg/L	0.01 mg/L	98.5	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0402 mg/L	0.04 mg/L	100	70.0	130	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1830423) - continued										
VA25A0056-002	WLNQ EOP	Cobalt, total	7440-48-4	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Copper, total	7440-50-8	E420	0.0194 mg/L	0.02 mg/L	97.2	70.0	130	----
		Iron, total	7439-89-6	E420	1.98 mg/L	2 mg/L	98.8	70.0	130	----
		Lead, total	7439-92-1	E420	0.0203 mg/L	0.02 mg/L	101	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0938 mg/L	0.1 mg/L	93.8	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0194 mg/L	0.02 mg/L	97.0	70.0	130	----
		Molybdenum, total	7439-98-7	E420	ND mg/L	----	ND	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0395 mg/L	0.04 mg/L	98.8	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.38 mg/L	10 mg/L	93.8	70.0	130	----
		Potassium, total	7440-09-7	E420	3.80 mg/L	4 mg/L	95.0	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0411 mg/L	0.04 mg/L	103	70.0	130	----
		Silicon, total	7440-21-3	E420	9.43 mg/L	10 mg/L	94.3	70.0	130	----
		Silver, total	7440-22-4	E420	0.00383 mg/L	0.004 mg/L	95.8	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	19.8 mg/L	20 mg/L	99.2	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0409 mg/L	0.04 mg/L	102	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00399 mg/L	0.004 mg/L	99.8	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0190 mg/L	0.02 mg/L	95.0	70.0	130	----
		Tin, total	7440-31-5	E420	0.0203 mg/L	0.02 mg/L	102	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0389 mg/L	0.04 mg/L	97.3	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0205 mg/L	0.02 mg/L	102	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00408 mg/L	0.004 mg/L	102	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0990 mg/L	0.1 mg/L	99.0	70.0	130	----
		Zinc, total	7440-66-6	E420	0.398 mg/L	0.4 mg/L	99.5	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0414 mg/L	0.04 mg/L	104	70.0	130	----
Total Metals (QCLot: 1834290)										
KS2500003-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000905 mg/L	0 mg/L	90.5	70.0	130	----
Dissolved Metals (QCLot: 1830436)										
FJ2500013-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.198 mg/L	0.2 mg/L	99.2	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0246 mg/L	0.02 mg/L	123	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0476 mg/L	0.04 mg/L	119	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0113 mg/L	0.01 mg/L	113	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.135 mg/L	0.1 mg/L	135	70.0	130	MES
		Cadmium, dissolved	7440-43-9	E421	0.00385 mg/L	0.004 mg/L	96.4	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0115 mg/L	0.01 mg/L	115	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0401 mg/L	0.04 mg/L	100	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0194 mg/L	0.02 mg/L	97.1	70.0	130	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1830436) - continued										
FJ2500013-002	Anonymous	Copper, dissolved	7440-50-8	E421	0.0184 mg/L	0.02 mg/L	92.0	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.92 mg/L	2 mg/L	96.0	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0230 mg/L	0.02 mg/L	115	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.124 mg/L	0.1 mg/L	124	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	0.0268 mg/L	0.02 mg/L	134	70.0	130	MES
		Nickel, dissolved	7440-02-0	E421	0.0380 mg/L	0.04 mg/L	95.1	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.6 mg/L	10 mg/L	106	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	4.17 mg/L	4 mg/L	104	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0194 mg/L	0.02 mg/L	96.9	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0448 mg/L	0.04 mg/L	112	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	10.8 mg/L	10 mg/L	108	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00340 mg/L	0.004 mg/L	85.1	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0486 mg/L	0.04 mg/L	122	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00457 mg/L	0.004 mg/L	114	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0151 mg/L	0.02 mg/L	75.5	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0406 mg/L	0.04 mg/L	101	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0245 mg/L	0.02 mg/L	123	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00520 mg/L	0.004 mg/L	130	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.376 mg/L	0.4 mg/L	94.1	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0514 mg/L	0.04 mg/L	128	70.0	130	----
Dissolved Metals (QCLot: 1834048)										
VA25A0056-002	WLNG EOP	Mercury, dissolved	7439-97-6	E509	0.0000799 mg/L	0 mg/L	79.9	70.0	130	----
Speciated Metals (QCLot: 1829684)										
VA25A0056-002	WLNG EOP	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.263 mg/L	0.25 mg/L	105	70.0	130	----
Aggregate Organics (QCLot: 1831307)										
EO2500033-015	Anonymous	Phenols, total (4AAP)	----	E562	0.0209 mg/L	0.02 mg/L	104	75.0	125	----
Volatile Organic Compounds (QCLot: 1829686)										
VA25A0143-001	Anonymous	Benzene	71-43-2	E611C	85.1 µg/L	100 µg/L	85.1	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	87.7 µg/L	100 µg/L	87.7	60.0	140	----
		Bromoform	75-25-2	E611C	99.7 µg/L	100 µg/L	99.7	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	93.6 µg/L	100 µg/L	93.6	60.0	140	----
		Chlorobenzene	108-90-7	E611C	96.6 µg/L	100 µg/L	96.6	60.0	140	----
		Chloroethane	75-00-3	E611C	107 µg/L	100 µg/L	107	50.0	150	----
		Chloroform	67-66-3	E611C	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Chloromethane	74-87-3	E611C	93.7 µg/L	100 µg/L	93.7	50.0	150	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1829686) - continued										
VA25A0143-001	Anonymous	Dibromochloromethane	124-48-1	E611C	98.9 µg/L	100 µg/L	98.9	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	104 µg/L	100 µg/L	104	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	89.6 µg/L	100 µg/L	89.6	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	85.6 µg/L	100 µg/L	85.6	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	86.0 µg/L	100 µg/L	86.0	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	83.4 µg/L	100 µg/L	83.4	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	91.2 µg/L	100 µg/L	91.2	60.0	140	----
		Dichloromethane	75-09-2	E611C	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	83.5 µg/L	100 µg/L	83.5	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Ethylbenzene	100-41-4	E611C	89.4 µg/L	100 µg/L	89.4	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		Styrene	100-42-5	E611C	89.9 µg/L	100 µg/L	89.9	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	99.1 µg/L	100 µg/L	99.1	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		Toluene	108-88-3	E611C	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	96.3 µg/L	100 µg/L	96.3	60.0	140	----
		Trichloroethylene	79-01-6	E611C	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	102 µg/L	100 µg/L	102	50.0	150	----
		Vinyl chloride	75-01-4	E611C	93.9 µg/L	100 µg/L	93.9	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	203 µg/L	200 µg/L	102	60.0	140	----
		Xylene, o-	95-47-6	E611C	87.3 µg/L	100 µg/L	87.3	60.0	140	----
Hydrocarbons (QCLot: 1829685)										
VA25A0056-002	WLNG EOP	VHw (C6-C10)	----	E581.VH+F1	4980 µg/L	6310 µg/L	78.9	60.0	140	----

Qualifiers

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



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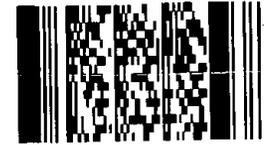
Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20

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Environmental Division
Vancouver
Work Order Reference
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HERE

Report To Contact and company name below will appear on the final report		Reports / Recipients			Turnaround Time (TAT) Request																																																																																		
Company: Triton Environmental		Select Report Format: <input type="checkbox"/> PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			<input checked="" type="checkbox"/> Routine (R) if received by 3pm M-F - no surcharge																																																																																		
Contact:		Merge QC/QCI Reports with COA <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A			<input type="checkbox"/> 4 day (P4) if received by 3pm M-F - 20% rush surc																																																																																		
Phone:		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			<input type="checkbox"/> 3 day (P3) if received by 3pm M-F - 25% rush surc																																																																																		
Street:		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			<input type="checkbox"/> 2 day (P2) if received by 3pm M-F - 50% rush surc																																																																																		
City/Province:					<input type="checkbox"/> 1 day (E) if received by 3pm M-F - 100% rush surc																																																																																		
Postal Code:					<input type="checkbox"/> Same day (E2) if received by 10am M-S - 200% ru																																																																																		
Invoice To		Same as Report To <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.																																																																																		
Company:		Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Date and Time Required for all E&P TATs: 16-JAN-25																																																																																		
Contact:					For all tests with rush TATs requested, please contact your AM to confirm availability.																																																																																		
Project Information		Analysis Request																																																																																					
ALS Account # / Quote #: VA23-TRIT100-012		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																																																					
Job #: 11964		<table border="1"> <thead> <tr> <th rowspan="2">NUMBER OF CONTAINERS</th> <th colspan="16">Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below</th> <th rowspan="2">SAMPLES ON HOLD</th> <th rowspan="2">EXTENDED STORAGE REQUIRED</th> <th rowspan="2">SUSPECTED HAZARD (see notes)</th> </tr> <tr> <th>Total metals + mercury</th> <th>Dissolved metals + mercury</th> <th>Total hexavalent chromium</th> <th>Total trivalent chromium</th> <th>TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)</th> <th>Total sulfide (low) (as H2S)</th> <th>Un-ionized Sulfide (low)</th> <th>Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)</th> <th>VOC/VPH</th> <th>EPH, PAH, LEPH/HEPH</th> <th>DOC</th> <th>Glycols</th> <th>General parameters (alkalinity)</th> <th>Phenols</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td></td><td></td><td></td> </tr> <tr> <td>16</td> <td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td></td><td></td><td></td> </tr> </tbody> </table>												NUMBER OF CONTAINERS	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)	Total metals + mercury	Dissolved metals + mercury	Total hexavalent chromium	Total trivalent chromium	TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)	Total sulfide (low) (as H2S)	Un-ionized Sulfide (low)	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)	VOC/VPH	EPH, PAH, LEPH/HEPH	DOC	Glycols	General parameters (alkalinity)	Phenols	16	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R				16	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R			
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16	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R																																																																							
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PO / AFE: 11964 - Task 40 - Phase 3C-4C																																																																																							
LSD:																																																																																							
ALS Lab Work Order # (ALS use only):																																																																																							
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type																																																																																			
	WLNG EOP	02-JAN-25	10:54	Water																																																																																			
	pH: 7.80 cond: 163 µS/cm temp: 9.5 °C																																																																																						
	WLNG EOP	01-JAN-25	11:07	Water																																																																																			
	pH: 7.28 cond: 180.2 µS/cm temp: 9.1 °C																																																																																						
Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)			SAMPLE RECEIPT DETAILS (ALS use only)																																																																																		
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Jan 1 - metals + mercury preserved. Jan 2 - not preserved. ESDAT EDD to ESDat_CA+tritonenv@ESdatLabSync.net			Cooling Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input checked="" type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED																																																																																		
Are samples for human consumption/ use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO																																																																																		
					Cooler Custody Seals Intact: <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A																																																																																		
					INITIAL COOLER TEMPERATURES °C						FINAL COOLER TEMPERATURES °C																																																																												
											5 9																																																																												
CLIENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)						FINAL SHIPMENT RECEPTION (ALS use only)																																																																															
Date: 2 Jan 25 Time: 14:15		Received by:		Date:		Time:		Date: 2/1/25		Time: 2:20																																																																													
REF		WHITE - LABORATORY COPY						YELLOW - CLIENT																																																																															

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

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

CERTIFICATE OF ANALYSIS

Work Order : **VA25A0056**
Client : **Triton Environmental Consultants Ltd.**
Contact
Address
 Telephone
Project : 11964
PO : 11964 - Task 40 - Phase 3C-4C
C-O-C number : ----
Sampler : ----
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 : 02-Jan-2025 14:20
Date Analysis Commenced : 03-Jan-2025
Issue Date : 10-Jan-2025 09:07

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.

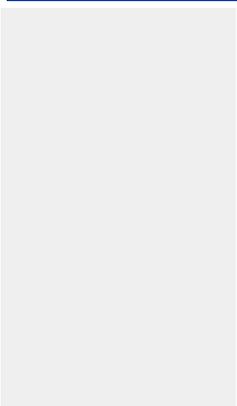
This Certificate of Analysis contains the following information:

- 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>
	Laboratory Analyst	Inorganics, Edmonton, Alberta
	Laboratory Analyst	Metals, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
	Supervisor - Organics Instrumentation	Organics, Burnaby, British Columbia
	Department Manager - Metals	Metals, Burnaby, British Columbia
	Supervisor - Water Chemistry	Inorganics, Burnaby, British Columbia
	Analyst- General	Inorganics, Burnaby, British Columbia
	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
	Account Manager Assistant	Administration, Burnaby, British Columbia
	Analyst- General	Metals, Burnaby, British Columbia
	Analyst- General	Organics, Burnaby, British Columbia



General Comments

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

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

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

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

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

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

<: less than.

>: greater than.

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

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

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

Qualifiers

<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	WLNG EOP	----	----	----
Client sampling date / time					02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm	163.00	180.20	----	----	----	
pH, field	----	EF001/VA	0.10	pH units	7.80	7.28	----	----	----	
Temperature, field	----	EF001/VA	0.10	°C	9.50	9.10	----	----	----	
Physical Tests										
Hardness (as CaCO ₃), dissolved	----	EC100/VA	0.60	mg/L	53.6	57.8	----	----	----	
Hardness (as CaCO ₃), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	60.9	56.2	----	----	----	
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	86	90	----	----	----	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	<3.0	----	----	----	
Alkalinity, total (as CaCO ₃)	----	E290/VA	2.0	mg/L	57.9	57.2	----	----	----	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0154	0.0240	----	----	----	
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	5.78	6.64	----	----	----	
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.200	0.202	----	----	----	
Nitrate (as N)	14797-55-8	E235.NO ₃ -L/VA	0.0050	mg/L	0.0207	0.0200	----	----	----	
Nitrite (as N)	14797-65-0	E235.NO ₂ -L/VA	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	0.244	0.272	----	----	----	
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0280	0.0032	----	----	----	
Sulfate (as SO ₄)	14808-79-8	E235.SO ₄ /VA	0.30	mg/L	6.17	6.35	----	----	----	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	<0.50	<0.50	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	WLNQ EOP	---	---	---
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	---	---	---	
					Result	Result	---	---	---	
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	<0.0015	---	---	---	
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	<0.0015	---	---	---	
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	<0.0016	---	---	---	
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0361	0.0415	---	---	---	
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	0.00076	0.00026	---	---	---	
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00135	0.00127	---	---	---	
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00394	0.00376	---	---	---	
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L	<0.000100	<0.000100	---	---	---	
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L	<0.000050	<0.000050	---	---	---	
Boron, total	7440-42-8	E420/VA	0.010	mg/L	0.015	0.014	---	---	---	
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000100 ^{DLM}	<0.0000100 ^{DLM}	---	---	---	
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	22.7	20.8	---	---	---	
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000021	0.000019	---	---	---	
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	<0.00050	<0.00050	---	---	---	
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010	<0.00010	---	---	---	
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	0.00078	0.00228	---	---	---	
Iron, total	7439-89-6	E420/VA	0.010	mg/L	<0.010	<0.010	---	---	---	
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000212	0.000469	---	---	---	
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0055	0.0038	---	---	---	
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	1.03	1.04	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	WLNG EOP	---	---	---
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	---	---	---	
					Result	Result	---	---	---	
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00489	0.00392	---	---	---	
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	0.0209	0.0200	---	---	---	
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	1.80	1.42	---	---	---	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00296	0.00244	---	---	---	
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	0.000065	0.000065	---	---	---	
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	6.34	5.74	---	---	---	
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	<0.000010	---	---	---	
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	5.08	5.24	---	---	---	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0454	0.0459	---	---	---	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	2.18	2.30	---	---	---	
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L	<0.00020	<0.00020	---	---	---	
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L	0.000013	0.000011	---	---	---	
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	<0.00030	<0.00030	---	---	---	
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	0.00077	0.00061	---	---	---	
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.00363	0.00396	---	---	---	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	<0.00050	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	WLNQ EOP	---	---	---
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	---	---	---	
					Result	Result	---	---	---	
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	0.0233	0.0323	---	---	---	
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	<0.00020	---	---	---	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0201	0.0177	---	---	---	
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	0.00066	0.00023	---	---	---	
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	0.00115	0.00112	---	---	---	
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00392	0.00372	---	---	---	
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	0.015	0.014	---	---	---	
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000100 ^{DLM}	<0.0000100 ^{DLM}	---	---	---	
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	19.8	21.5	---	---	---	
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	0.000019	0.000018	---	---	---	
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	0.00070	0.00184	---	---	---	
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	<0.010	<0.010	---	---	---	
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	0.000160	0.000378	---	---	---	
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	0.0050	0.0040	---	---	---	
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	1.02	1.00	---	---	---	
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00489	0.00363	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	WLNG EOP	---	---	---
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	---	---	---	
					Result	Result	---	---	---	
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L	<0.0000050	<0.0000050	---	---	---	
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	0.0188	0.0192	---	---	---	
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	1.79	1.41	---	---	---	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00311	0.00232	---	---	---	
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	0.000077	0.000071	---	---	---	
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	5.65	5.64	---	---	---	
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	4.96	4.93	---	---	---	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0405	0.0459	---	---	---	
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	2.21	2.20	---	---	---	
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	0.00071	0.00061	---	---	---	
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L	0.00335	0.00393	---	---	---	
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	0.0220	0.0303	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	WLNQ EOP	---	---	---
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	---	---	---	
					Result	Result	---	---	---	
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	<0.00020	<0.00020	---	---	---	
Dissolved mercury filtration location	---	EP509/VA	-	-	Field	Field	---	---	---	
Dissolved metals filtration location	---	EP421/VA	-	-	Field	Field	---	---	---	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	<0.00050	---	---	---	
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	<0.00050	---	---	---	
Aggregate Organics										
Phenols, total (4AAP)	---	E562/EO	0.0010	mg/L	<0.0010	<0.0010	---	---	---	
Volatile Organic Compounds										
Chlorobenzene	108-90-7	E611C/VA	0.50	µg/L	<0.50	<0.50	---	---	---	
Chloromethane	74-87-3	E611C/VA	5.0	µg/L	<5.0	<5.0	---	---	---	
Dichlorobenzene, 1,2-	95-50-1	E611C/VA	0.50	µg/L	<0.50	<0.50	---	---	---	
Dichlorobenzene, 1,3-	541-73-1	E611C/VA	0.50	µg/L	<0.50	<0.50	---	---	---	
Dichlorobenzene, 1,4-	106-46-7	E611C/VA	0.50	µg/L	<0.50	<0.50	---	---	---	
Dichloropropane, 1,2-	78-87-5	E611C/VA	0.50	µg/L	<0.50	<0.50	---	---	---	
Dichloropropylene, cis-1,3-	10061-01-5	E611C/VA	0.50	µg/L	<0.50	<0.50	---	---	---	
Dichloropropylene, cis+trans-1,3-	542-75-6	E611C/VA	0.75	µg/L	<0.75	<0.75	---	---	---	
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C/VA	0.50	µg/L	<0.50	<0.50	---	---	---	
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C/VA	0.20	µg/L	<0.20	<0.20	---	---	---	
Trichloroethane, 1,1,2-	79-00-5	E611C/VA	0.50	µg/L	<0.50	<0.50	---	---	---	
Trichlorofluoromethane	75-69-4	E611C/VA	0.50	µg/L	<0.50	<0.50	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	WLNQ EOP	----	----	----
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Volatile Organic Compounds [Drycleaning]										
Carbon tetrachloride	56-23-5	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Chloroethane	75-00-3	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloroethane, 1,1-	75-34-3	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloroethane, 1,2-	107-06-2	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloroethylene, 1,1-	75-35-4	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloroethylene, cis-1,2-	156-59-2	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloroethylene, trans-1,2-	156-60-5	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dichloromethane	75-09-2	E611CVA	1.0	µg/L	<1.0	<1.0	----	----	----	
Dichloropropylene, trans-1,3-	10061-02-6	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Tetrachloroethylene	127-18-4	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Trichloroethane, 1,1,1-	71-55-6	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Trichloroethylene	79-01-6	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Vinyl chloride	75-01-4	E611CVA	0.40	µg/L	<0.40	<0.40	----	----	----	
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Ethylbenzene	100-41-4	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Styrene	100-42-5	E611CVA	0.50	µg/L	<0.50	<0.50	----	----	----	
Toluene	108-88-3	E611CVA	0.40	µg/L	<0.40	<0.40	----	----	----	
Xylene, m+p-	179601-23-1	E611CVA	0.40	µg/L	<0.40	<0.40	----	----	----	
Xylene, o-	95-47-6	E611CVA	0.30	µg/L	<0.30	<0.30	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	WLNG EOP	----	----	----
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Volatile Organic Compounds [Fuels]										
Xylenes, total	1330-20-7	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Volatile Organic Compounds [THMs]										
Bromodichloromethane	75-27-4	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Bromoform	75-25-2	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Chloroform	67-66-3	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Dibromochloromethane	124-48-1	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----	
Hydrocarbons										
EPH (C10-C19)	----	E601A/VA	250	µg/L	<250	<250	----	----	----	
EPH (C19-C32)	----	E601A/VA	250	µg/L	<250	<250	----	----	----	
VHw (C6-C10)	----	E581.VH+F1/V A	100	µg/L	<100	<100	----	----	----	
HEPHw	----	EC600A/VA	250	µg/L	<250	<250	----	----	----	
LEPHw	----	EC600A/VA	250	µg/L	<250	<250	----	----	----	
VPHw	----	EC580A/VA	100	µg/L	<100	<100	----	----	----	
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%	90.3	91.5	----	----	----	
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/V A	1.0	%	107	98.6	----	----	----	
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%	81.5	85.0	----	----	----	
Difluorobenzene, 1,4-	540-36-3	E611C/VA	1.0	%	99.6	102	----	----	----	
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	WLNG EOP	----	----	----
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	----	----	----	
					Result	Result	----	----	----	
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Acridine	260-94-6	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Anthracene	120-12-7	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L	<0.0050	<0.0050	----	----	----	
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L	<0.015	<0.015	----	----	----	
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Chrysene	218-01-9	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L	<0.0050	<0.0050	----	----	----	
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Fluorene	86-73-7	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L	0.018	<0.010	----	----	----	
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L	0.018	<0.010	----	----	----	
Naphthalene	91-20-3	E641A/VA	0.050	µg/L	<0.050	<0.050	----	----	----	
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L	<0.020	<0.020	----	----	----	
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	<0.010	----	----	----	
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	<0.050	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	WLNQ EOP	---	---	---
					Client sampling date / time	02-Jan-2025 10:54	01-Jan-2025 11:07	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0056-001	VA25A0056-002	---	---	---	
					Result	Result	---	---	---	
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	86.1	88.2	---	---	---	
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	92.7	84.3	---	---	---	
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	88.7	80.5	---	---	---	
Glycols										
Diethylene glycol	111-46-6	E680E/VA	5.0	mg/L	<5.0	<5.0	---	---	---	
Ethylene glycol	107-21-1	E680E/VA	5.0	mg/L	<5.0	<5.0	---	---	---	
Propylene glycol, 1,2-	57-55-6	E680E/VA	5.0	mg/L	<5.0	<5.0	---	---	---	
Triethylene glycol	112-27-6	E680E/VA	5.0	mg/L	<5.0	<5.0	---	---	---	
Glycols, total (EG+DEG+PG)	---	E680E/VA	10	mg/L	<10	<10	---	---	---	
Glycols Surrogates										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%	95.9	96.6	---	---	---	

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

QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : VA25A0056</p> <p>Client : Triton Environmental Consultants Ltd.</p> <p>Contact : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Project : 11964</p> <p>PO : 11964 - Task 40 - Phase 3C-4C</p> <p>C-O-C number : ----</p> <p>Sampler : ----</p> <p>Site : Water Analysis</p> <p>Quote number : VA23-TRIT100-012_V2</p> <p>No. of samples received : 2</p> <p>No. of samples analysed : 2</p>	<p>Page : 1 of 18</p> <p>Laboratory : ALS Environmental - Vancouver</p> <p>Account Manager : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Date Samples Received : 02-Jan-2025 14:20</p> <p>Issue Date : 10-Jan-2025 09:06</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
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Boron, dissolved	7440-42-8	E421	135 % ^{MES}	70.0-130%	Recovery greater than upper data quality objective
Dissolved Metals	Anonymous	Anonymous	Molybdenum, dissolved	7439-98-7	E421	134 % ^{MES}	70.0-130%	Recovery greater than upper data quality objective

Result Qualifiers

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



Analysis Holding Time Compliance

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

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

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

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

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry											
Amber glass total (sulfuric acid) WLNG EOP	E562	02-Jan-2025	07-Jan-2025	28 days	5 days	✔	07-Jan-2025	28 days	5 days	✔	
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry											
Amber glass total (sulfuric acid) WLNG EOP	E562	01-Jan-2025	07-Jan-2025	28 days	6 days	✔	07-Jan-2025	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) WLNG EOP	E298	02-Jan-2025	04-Jan-2025	28 days	2 days	✔	06-Jan-2025	28 days	4 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) WLNG EOP	E298	01-Jan-2025	04-Jan-2025	28 days	3 days	✔	06-Jan-2025	28 days	5 days	✔	
Anions and Nutrients : Bromide in Water by IC (Low Level)											
HDPE WLNG EOP	E235.Br-L	02-Jan-2025	03-Jan-2025	28 days	1 days	✔	03-Jan-2025	28 days	1 days	✔	
Anions and Nutrients : Bromide in Water by IC (Low Level)											
HDPE WLNG EOP	E235.Br-L	01-Jan-2025	03-Jan-2025	28 days	2 days	✔	03-Jan-2025	28 days	2 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE WLNG EOP	E235.Cl	02-Jan-2025	03-Jan-2025	28 days	1 days	✔	03-Jan-2025	28 days	1 days	✔	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Chloride in Water by IC											
HDPE WLNG EOP	E235.Cl	01-Jan-2025	03-Jan-2025	28 days	2 days	✓	03-Jan-2025	28 days	2 days	✓	
Anions and Nutrients : Fluoride in Water by IC											
HDPE WLNG EOP	E235.F	02-Jan-2025	03-Jan-2025	28 days	1 days	✓	03-Jan-2025	28 days	1 days	✓	
Anions and Nutrients : Fluoride in Water by IC											
HDPE WLNG EOP	E235.F	01-Jan-2025	03-Jan-2025	28 days	2 days	✓	03-Jan-2025	28 days	2 days	✓	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO3-L	02-Jan-2025	03-Jan-2025	3 days	1 days	✓	03-Jan-2025	3 days	1 days	✓	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO3-L	01-Jan-2025	03-Jan-2025	3 days	2 days	✓	03-Jan-2025	3 days	2 days	✓	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO2-L	02-Jan-2025	03-Jan-2025	3 days	1 days	✓	03-Jan-2025	3 days	1 days	✓	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO2-L	01-Jan-2025	03-Jan-2025	3 days	2 days	✓	03-Jan-2025	3 days	2 days	✓	
Anions and Nutrients : Sulfate in Water by IC											
HDPE WLNG EOP	E235.SO4	02-Jan-2025	03-Jan-2025	28 days	1 days	✓	03-Jan-2025	28 days	1 days	✓	
Anions and Nutrients : Sulfate in Water by IC											
HDPE WLNG EOP	E235.SO4	01-Jan-2025	03-Jan-2025	28 days	2 days	✓	03-Jan-2025	28 days	2 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Total Nitrogen by Colourimetry											
Amber glass total (sulfuric acid) WLNG EOP	E366	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	05-Jan-2025	28 days	3 days	✓	
Anions and Nutrients : Total Nitrogen by Colourimetry											
Amber glass total (sulfuric acid) WLNG EOP	E366	01-Jan-2025	04-Jan-2025	28 days	3 days	✓	05-Jan-2025	28 days	4 days	✓	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)											
Amber glass total (sulfuric acid) WLNG EOP	E372-U	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	07-Jan-2025	28 days	5 days	✓	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)											
Amber glass total (sulfuric acid) WLNG EOP	E372-U	01-Jan-2025	04-Jan-2025	28 days	3 days	✓	07-Jan-2025	28 days	6 days	✓	
Dissolved Metals : Dissolved Mercury in Water by CVAAS											
Glass vial - dissolved (lab preserved) WLNG EOP	E509	02-Jan-2025	09-Jan-2025	28 days	7 days	✓	09-Jan-2025	28 days	7 days	✓	
Dissolved Metals : Dissolved Mercury in Water by CVAAS											
Glass vial dissolved (hydrochloric acid) WLNG EOP	E509	01-Jan-2025	09-Jan-2025	28 days	8 days	✓	09-Jan-2025	28 days	8 days	✓	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE - dissolved (lab preserved) WLNG EOP	E421	02-Jan-2025	07-Jan-2025	180 days	5 days	✓	09-Jan-2025	180 days	7 days	✓	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) WLNG EOP	E421	01-Jan-2025	07-Jan-2025	180 days	6 days	✓	09-Jan-2025	180 days	8 days	✓	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine											
Glass vial - dissolved (lab preserved) WLNG EOP	EF001	02-Jan-2025	----	----	----		03-Jan-2025	----	1 days		



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine											
Glass vial dissolved (hydrochloric acid) WLNG EOP	EF001	01-Jan-2025	----	----	----		03-Jan-2025	----	2 days		
Glycols : Glycols (4 analytes) by GC-FID											
Glass vial WLNG EOP	E680E	02-Jan-2025	05-Jan-2025	7 days	3 days	✓	06-Jan-2025	40 days	1 days	✓	
Glycols : Glycols (4 analytes) by GC-FID											
Glass vial WLNG EOP	E680E	01-Jan-2025	05-Jan-2025	7 days	4 days	✓	06-Jan-2025	40 days	1 days	✓	
Hydrocarbons : BC PHCs - EPH by GC-FID											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E601A	02-Jan-2025	07-Jan-2025	14 days	5 days	✓	09-Jan-2025	40 days	2 days	✓	
Hydrocarbons : BC PHCs - EPH by GC-FID											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E601A	01-Jan-2025	07-Jan-2025	14 days	6 days	✓	09-Jan-2025	40 days	2 days	✓	
Hydrocarbons : VH and F1 by Headspace GC-FID											
Glass vial (sodium bisulfate) WLNG EOP	E581.VH+F1	02-Jan-2025	04-Jan-2025	14 days	2 days	✓	04-Jan-2025	14 days	2 days	✓	
Hydrocarbons : VH and F1 by Headspace GC-FID											
Glass vial (sodium bisulfate) WLNG EOP	E581.VH+F1	01-Jan-2025	04-Jan-2025	14 days	3 days	✓	04-Jan-2025	14 days	3 days	✓	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)											
Amber glass dissolved (sulfuric acid) WLNG EOP	E358-L	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	04-Jan-2025	28 days	2 days	✓	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)											
Amber glass dissolved (sulfuric acid) WLNG EOP	E358-L	01-Jan-2025	04-Jan-2025	28 days	3 days	✓	04-Jan-2025	28 days	3 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : Alkalinity Species by Titration											
HDPE WLNG EOP	E290	02-Jan-2025	03-Jan-2025	14 days	1 days	✓	03-Jan-2025	14 days	1 days	✓	
Physical Tests : Alkalinity Species by Titration											
HDPE WLNG EOP	E290	01-Jan-2025	03-Jan-2025	14 days	2 days	✓	03-Jan-2025	14 days	2 days	✓	
Physical Tests : TDS by Gravimetry											
HDPE WLNG EOP	E162	02-Jan-2025	----	----	----		05-Jan-2025	7 days	3 days	✓	
Physical Tests : TDS by Gravimetry											
HDPE WLNG EOP	E162	01-Jan-2025	----	----	----		05-Jan-2025	7 days	4 days	✓	
Physical Tests : TSS by Gravimetry											
HDPE WLNG EOP	E160	02-Jan-2025	----	----	----		05-Jan-2025	7 days	3 days	✓	
Physical Tests : TSS by Gravimetry											
HDPE WLNG EOP	E160	01-Jan-2025	----	----	----		05-Jan-2025	7 days	4 days	✓	
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	02-Jan-2025	07-Jan-2025	14 days	5 days	✓	07-Jan-2025	40 days	1 days	✓	
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	01-Jan-2025	07-Jan-2025	14 days	6 days	✓	07-Jan-2025	40 days	1 days	✓	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC											
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	02-Jan-2025	----	----	----		04-Jan-2025	28 days	2 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	01-Jan-2025	----	----	----		04-Jan-2025	28 days	3 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial - total (lab preserved) WLNG EOP	E508	02-Jan-2025	09-Jan-2025	28 days	7 days	✓	09-Jan-2025	28 days	7 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG EOP	E508	01-Jan-2025	09-Jan-2025	28 days	8 days	✓	09-Jan-2025	28 days	8 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) WLNG EOP	E420	02-Jan-2025	07-Jan-2025	180 days	5 days	✓	09-Jan-2025	180 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG EOP	E420	01-Jan-2025	07-Jan-2025	180 days	6 days	✓	09-Jan-2025	180 days	8 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	02-Jan-2025	----	----	----		06-Jan-2025	7 days	4 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	01-Jan-2025	----	----	----		06-Jan-2025	7 days	5 days	✓
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate) WLNG EOP	E611C	02-Jan-2025	04-Jan-2025	14 days	2 days	✓	04-Jan-2025	14 days	2 days	✓
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate) WLNG EOP	E611C	01-Jan-2025	04-Jan-2025	14 days	3 days	✓	04-Jan-2025	14 days	3 days	✓

[Legend & Qualifier Definitions](#)

Page : 10 of 18
Work Order : VA25A0056
Client : Triton Environmental Consultants Ltd.
Project : 11964



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
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1829113	1	18	5.5	5.0	✓
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✓
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✓
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1831307	1	15	6.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1829113	1	18	5.5	5.0	✓
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1831206	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✓
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✓
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	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
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
PAHs in Water by Hexane LVI GC-MS	E641A	1831207	1	14	7.1	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1831307	1	15	6.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1829113	1	18	5.5	5.0	✓
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1831206	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✓
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✓
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1831207	1	14	7.1	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1831307	1	15	6.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	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>							
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✔
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1831307	1	15	6.6	5.0	✔
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	5.0	✔



Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$, 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 ₂ . 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 ₂ S" if reported represent the maximum possible H ₂ S concentration based on the total sulfide concentration in the sample. The H ₂ S calculation converts Total Sulphide as (S ₂ ⁻) and reports it as Total Sulphide as (H ₂ 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 ₃ Fe(CN) ₆) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
VH and F1 by Headspace GC-FID	E581.VH+F1 ALS Environmental - Vancouver	Water	BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod)	Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
BC PHCs - EPH by GC-FID	E601A ALS Environmental - Vancouver	Water	BC MOE Lab Manual	Sample extracts are analyzed by GC-FID for BC hydrocarbon fractions.
VOCs (BC List) by Headspace GC-MS	E611C ALS Environmental - Vancouver	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Total Xylenes is the sum of m,p-Xylene & o-Xylene. Total BTEX is the sum of Benzene, Toluene, Ethylbenzene, & Total Xylenes. Total BTEX+Styrene is the sum of Total BTEX & Styrene. Total Trihalomethanes [THMs] is the sum of Bromodichloromethane, Bromoform, Chloroform, & Dibromochloromethane.
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Vancouver	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
Glycols (4 analytes) by GC-FID	E680E ALS Environmental - Vancouver	Water	EPA 8015D (mod)	Derivatized glycols are analyzed by GC-FID.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. 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 ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ ,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ 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 ₃ .
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 : **VA25A0056**

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 : 2

No. of samples analysed : 2

Page : 1 of 23

Laboratory : ALS Environmental - Vancouver

Account Manager : [Redacted]

Address : [Redacted]

Telephone : [Redacted]

Date Samples Received : 02-Jan-2025 14:20

Date Analysis Commenced : 03-Jan-2025

Issue Date : 10-Jan-2025 09:07

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]	Laboratory Analyst	Edmonton Inorganics, Edmonton, Alberta
	Laboratory Analyst	Vancouver Metals, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
	Supervisor - Organics Instrumentation	Vancouver Organics, Burnaby, British Columbia
	Department Manager - Metals	Vancouver Metals, Burnaby, British Columbia
	Supervisor - Water Chemistry	Vancouver Inorganics, Burnaby, British Columbia
	Analyst- General	Vancouver Inorganics, Burnaby, British Columbia
	Department Manager - Inorganics	Vancouver Inorganics, Burnaby, British Columbia
	Account Manager Assistant	Vancouver Administration, Burnaby, British Columbia
	Analyst- General	Vancouver Metals, Burnaby, British Columbia
	Analyst- General	Vancouver Organics, Burnaby, British Columbia

Page : 2 of 23
Work Order : VA25A0056
Client : Triton Environmental Consultants Ltd.
Project : 11964



General Comments

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

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1829113)											
VA24D4448-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	152	153	0.523%	20%	----
Physical Tests (QC Lot: 1830076)											
VA24D4481-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1830078)											
VA24D4481-001	Anonymous	Solids, total dissolved [TDS]	----	E162	13	mg/L	44	48	4	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829115)											
VA24D4448-001	Anonymous	Fluoride	16984-48-8	E235.F	0.334	mg/L	<0.334	<0.334	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829116)											
VA24D4448-001	Anonymous	Chloride	16887-00-6	E235.Cl	2.50	mg/L	41.9	40.8	2.72%	20%	----
Anions and Nutrients (QC Lot: 1829117)											
VA24D4448-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.250	mg/L	<0.250	<0.250	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829118)											
VA24D4448-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0250	mg/L	31.1	30.4	2.52%	20%	----
Anions and Nutrients (QC Lot: 1829119)											
VA24D4448-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0050	mg/L	1.52	1.50	1.48%	20%	----
Anions and Nutrients (QC Lot: 1829120)											
VA24D4448-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	166	162	2.87%	20%	----
Anions and Nutrients (QC Lot: 1829970)											
FJ2500001-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.300	mg/L	12.2	12.0	1.51%	20%	----
Anions and Nutrients (QC Lot: 1829971)											
FJ2500001-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0400	mg/L	5.86	5.93	1.31%	20%	----
Anions and Nutrients (QC Lot: 1829972)											
FJ2500001-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.500	mg/L	10.4	10.5	0.832%	20%	----
Organic / Inorganic Carbon (QC Lot: 1829973)											
VA25A0056-001	WLNG EOP	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Total Sulfides (QC Lot: 1830800)											
TY2500054-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0257	0.0247	4.09%	20%	----
Total Metals (QC Lot: 1830423)											
VA25A0056-001	WLNG EOP	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0361	0.0382	5.87%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00076	0.00074	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
Total Metals (QC Lot: 1830423) - continued											
VA25A0056-001	WLNG EOP	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00135	0.00128	4.88%	20%	---
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.00394	0.00399	1.41%	20%	---
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	---
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Boron, total	7440-42-8	E420	0.010	mg/L	0.015	0.015	0.0002	Diff <2x LOR	---
		Cadmium, total	7440-43-9	E420	0.0000100	mg/L	<0.0000100	<0.0000100	0	Diff <2x LOR	---
		Calcium, total	7440-70-2	E420	0.050	mg/L	22.7	21.7	4.67%	20%	---
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000021	0.000019	0.000002	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	<0.00010	<0.00010	0	Diff <2x LOR	---
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00078	0.00076	0.00001	Diff <2x LOR	---
		Iron, total	7439-89-6	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000212	0.000212	0.0000004	Diff <2x LOR	---
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0055	0.0055	0.00004	Diff <2x LOR	---
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.03	1.03	0.243%	20%	---
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00489	0.00492	0.539%	20%	---
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.0209	0.0209	0.137%	20%	---
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	---
		Potassium, total	7440-09-7	E420	0.050	mg/L	1.80	1.81	0.474%	20%	---
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00296	0.00293	0.852%	20%	---
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000065	0.000074	0.000009	Diff <2x LOR	---
		Silicon, total	7440-21-3	E420	0.10	mg/L	6.34	6.19	2.38%	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	5.08	5.20	2.49%	20%	---
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0454	0.0441	3.01%	20%	---
		Sulfur, total	7704-34-9	E420	0.50	mg/L	2.18	2.11	0.07	Diff <2x LOR	---
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000013	0.000011	0.000001	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	0.00077	0.00076	0.000008	Diff <2x LOR	---
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00363	0.00361	0.424%	20%	---



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1830423) - continued											
VA25A0056-001	WLNG EOP	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	0.0233	0.0226	0.0007	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1834290)											
KS2405395-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	0.0000125	0.0000154	0.0000029	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1830436)											
FJ2500013-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.128	0.130	1.87%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00050	0.00049	0.000003	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00060	0.00057	0.00002	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0748	0.0781	4.24%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.104	0.099	5.20%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.000250	0.000263	5.23%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	66.8	65.3	2.30%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	0.000010	0.0000005	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	0.0119	0.0124	4.33%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00068	0.00071	0.00004	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	0.0569	0.0544	4.62%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	23.4	25.0	6.71%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.244	0.251	2.94%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00515	0.00512	0.441%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0387	0.0399	3.16%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	2.82	3.00	6.31%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00289	0.00311	7.16%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000686	0.000736	6.99%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.10	3.00	3.42%	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	131	133	1.66%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.347	0.340	2.04%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1830436) - continued											
FJ2500013-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	118	114	3.17%	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	0.000012	0.000012	0.0000004	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	0.00031	0.00029	0.00002	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00190	0.00189	0.792%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	0.00076	0.00076	0.000004	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0167	0.0171	1.95%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1834048)											
VA25A0056-001	WLNG EOP	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1829684)											
VA25A0056-001	WLNG EOP	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1831307)											
CG2500037-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1829686)											
VA25A0056-001	WLNG EOP	Benzene	71-43-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611C	5.0	µg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1829686) - continued											
VA25A0056-001	W LNG EOP	Dichloroethylene, trans-1,2-	156-60-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611C	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
Xylene, o-	95-47-6	E611C	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----		
Hydrocarbons (QC Lot: 1829685)											
VA25A0056-001	W LNG EOP	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1830136)											
VA25A0023-001	Anonymous	Diethylene glycol	111-46-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Ethylene glycol	107-21-1	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Propylene glycol, 1,2-	57-55-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Triethylene glycol	112-27-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----



Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1829113)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1830076)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1830078)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1829115)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1829116)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1829117)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1829118)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1829119)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1829120)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1829970)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1829971)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1829972)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 1829973)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1830800)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1830423)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1830423) - continued						
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1834290)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1830436)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1830436) - continued						
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1834048)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1829684)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1831307)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1829686)						
Benzene	71-43-2	E611C	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611C	0.5	µg/L	<0.50	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	<0.50	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611C	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611C	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611C	5	µg/L	<5.0	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611C	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	<0.50	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1829686) - continued						
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611C	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	<0.20	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611C	0.4	µg/L	<0.40	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	<0.40	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 1829685)						
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Hydrocarbons (QCLot: 1831206)						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1831207)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----



Sub-Matrix: **Water**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
Polycyclic Aromatic Hydrocarbons (QCLot: 1831207) - continued						
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A	0.05	µg/L	<0.050	----
Glycols (QCLot: 1830136)						
Diethylene glycol	111-46-6	E680E	5	mg/L	<5.0	----
Ethylene glycol	107-21-1	E680E	5	mg/L	<5.0	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	<5.0	----
Triethylene glycol	112-27-6	E680E	5	mg/L	<5.0	----



Laboratory Control Sample (LCS) Report

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

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1829113)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	106	85.0	115	----
Physical Tests (QCLot: 1830076)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	99.7	85.0	115	----
Physical Tests (QCLot: 1830078)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	98.6	85.0	115	----
Anions and Nutrients (QCLot: 1829115)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1829116)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1829117)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	105	85.0	115	----
Anions and Nutrients (QCLot: 1829118)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1829119)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1829120)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 1829970)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1829971)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	95.1	80.0	120	----
Anions and Nutrients (QCLot: 1829972)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	92.7	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1829973)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	98.6	80.0	120	----
Total Sulfides (QCLot: 1830800)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	103	80.0	120	----
Total Metals (QCLot: 1830423)									



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830423) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	100	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	100.0	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	98.5	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	97.8	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	102	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	98.7	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	97.7	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	95.5	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	95.4	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	98.8	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	94.3	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	99.0	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	95.5	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.7	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	99.2	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	99.8	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	100	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	100	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	110	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	87.7	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	99.5	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	92.5	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	100	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	94.6	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	98.1	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	95.1	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	98.6	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	96.8	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	97.6	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830423) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	94.5	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	92.1	80.0	120	----
Total Metals (QCLot: 1834290)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	83.2	80.0	120	----
Dissolved Metals (QCLot: 1830436)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	97.5	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	104	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	98.1	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	96.9	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	96.2	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	99.3	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	97.7	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	98.6	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	98.9	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	97.4	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	93.9	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	96.9	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	106	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	98.8	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	103	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	96.0	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	104	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	96.8	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	98.0	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	106	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	90.2	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	106	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	104	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	96.7	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1830436) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	98.3	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	102	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	82.4	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	102	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	99.8	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	99.1	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	99.9	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	99.8	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	99.2	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	81.5	80.0	120	----
Speciated Metals (QCLot: 1829684)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	99.4	80.0	120	----
Aggregate Organics (QCLot: 1831307)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	104	85.0	115	----
Volatile Organic Compounds (QCLot: 1829686)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	89.7	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	89.4	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	97.8	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	94.2	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	97.0	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	112	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	92.7	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	98.7	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	97.1	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	97.2	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	100	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	100 µg/L	92.3	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	87.2	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	89.8	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	88.2	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	91.4	70.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1829686) - continued									
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	97.3	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	90.8	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	88.9	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	93.7	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	92.8	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	97.6	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	96.4	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	96.9	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	94.6	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	98.0	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	90.6	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	103	60.0	140	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	101	60.0	140	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	200 µg/L	100	70.0	130	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	91.0	70.0	130	----
Hydrocarbons (QCLot: 1829685)									
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	6310 µg/L	75.8	70.0	130	----
Hydrocarbons (QCLot: 1831206)									
EPH (C10-C19)	----	E601A	250	µg/L	6490 µg/L	105	70.0	130	----
EPH (C19-C32)	----	E601A	250	µg/L	3360 µg/L	108	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1831207)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	90.2	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	95.0	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	106	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	103	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	116	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	102	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	97.5	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	106	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	96.2	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	106	60.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1831207) - continued									
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	109	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	107	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	93.3	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	116	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	77.6	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	87.0	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	89.9	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	107	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	106	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	116	60.0	130	----
Glycols (QCLot: 1830136)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	94.4	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	94.5	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	92.8	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	92.8	70.0	130	----



Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1829115)										
VA24D4448-002	Anonymous	Fluoride	16984-48-8	E235.F	4.94 mg/L	5 mg/L	98.7	75.0	125	----
Anions and Nutrients (QCLot: 1829116)										
VA24D4448-002	Anonymous	Chloride	16887-00-6	E235.Cl	504 mg/L	500 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1829117)										
VA24D4448-002	Anonymous	Bromide	24959-67-9	E235.Br-L	2.61 mg/L	2.5 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1829118)										
VA24D4448-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1829119)										
VA24D4448-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.51 mg/L	2.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1829120)										
VA24D4448-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	501 mg/L	500 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1829970)										
KS2405390-001	Anonymous	Nitrogen, total	7727-37-9	E366	1.84 mg/L	2 mg/L	92.2	70.0	130	----
Anions and Nutrients (QCLot: 1829971)										
KS2405389-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1829972)										
VA25A0056-001	WLNG EOP	Ammonia, total (as N)	7664-41-7	E298	0.104 mg/L	0.1 mg/L	104	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1829973)										
VA25A0056-002	WLNG EOP	Carbon, dissolved organic [DOC]	----	E358-L	5.28 mg/L	5 mg/L	106	70.0	130	----
Total Sulfides (QCLot: 1830800)										
TY2500054-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.222 mg/L	0.2 mg/L	111	75.0	125	----
Total Metals (QCLot: 1830423)										
VA25A0056-002	WLNG EOP	Aluminum, total	7429-90-5	E420	0.187 mg/L	0.2 mg/L	93.3	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0195 mg/L	0.02 mg/L	97.5	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Barium, total	7440-39-3	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0383 mg/L	0.04 mg/L	95.8	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0100 mg/L	0.01 mg/L	100	70.0	130	----
		Boron, total	7440-42-8	E420	0.096 mg/L	0.1 mg/L	96.5	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00403 mg/L	0.004 mg/L	101	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00985 mg/L	0.01 mg/L	98.5	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0402 mg/L	0.04 mg/L	100	70.0	130	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1830423) - continued										
VA25A0056-002	WLNG EOP	Cobalt, total	7440-48-4	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Copper, total	7440-50-8	E420	0.0194 mg/L	0.02 mg/L	97.2	70.0	130	----
		Iron, total	7439-89-6	E420	1.98 mg/L	2 mg/L	98.8	70.0	130	----
		Lead, total	7439-92-1	E420	0.0203 mg/L	0.02 mg/L	101	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0938 mg/L	0.1 mg/L	93.8	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0194 mg/L	0.02 mg/L	97.0	70.0	130	----
		Molybdenum, total	7439-98-7	E420	ND mg/L	----	ND	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0395 mg/L	0.04 mg/L	98.8	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.38 mg/L	10 mg/L	93.8	70.0	130	----
		Potassium, total	7440-09-7	E420	3.80 mg/L	4 mg/L	95.0	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0411 mg/L	0.04 mg/L	103	70.0	130	----
		Silicon, total	7440-21-3	E420	9.43 mg/L	10 mg/L	94.3	70.0	130	----
		Silver, total	7440-22-4	E420	0.00383 mg/L	0.004 mg/L	95.8	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	19.8 mg/L	20 mg/L	99.2	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0409 mg/L	0.04 mg/L	102	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00399 mg/L	0.004 mg/L	99.8	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0190 mg/L	0.02 mg/L	95.0	70.0	130	----
		Tin, total	7440-31-5	E420	0.0203 mg/L	0.02 mg/L	102	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0389 mg/L	0.04 mg/L	97.3	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0205 mg/L	0.02 mg/L	102	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00408 mg/L	0.004 mg/L	102	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0990 mg/L	0.1 mg/L	99.0	70.0	130	----
		Zinc, total	7440-66-6	E420	0.398 mg/L	0.4 mg/L	99.5	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0414 mg/L	0.04 mg/L	104	70.0	130	----
Total Metals (QCLot: 1834290)										
KS2500003-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000905 mg/L	0 mg/L	90.5	70.0	130	----
Dissolved Metals (QCLot: 1830436)										
FJ2500013-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.198 mg/L	0.2 mg/L	99.2	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0246 mg/L	0.02 mg/L	123	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0476 mg/L	0.04 mg/L	119	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0113 mg/L	0.01 mg/L	113	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.135 mg/L	0.1 mg/L	135	70.0	130	MES
		Cadmium, dissolved	7440-43-9	E421	0.00385 mg/L	0.004 mg/L	96.4	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0115 mg/L	0.01 mg/L	115	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0401 mg/L	0.04 mg/L	100	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0194 mg/L	0.02 mg/L	97.1	70.0	130	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1830436) - continued										
FJ2500013-002	Anonymous	Copper, dissolved	7440-50-8	E421	0.0184 mg/L	0.02 mg/L	92.0	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.92 mg/L	2 mg/L	96.0	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0230 mg/L	0.02 mg/L	115	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.124 mg/L	0.1 mg/L	124	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	0.0268 mg/L	0.02 mg/L	134	70.0	130	MES
		Nickel, dissolved	7440-02-0	E421	0.0380 mg/L	0.04 mg/L	95.1	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.6 mg/L	10 mg/L	106	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	4.17 mg/L	4 mg/L	104	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0194 mg/L	0.02 mg/L	96.9	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0448 mg/L	0.04 mg/L	112	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	10.8 mg/L	10 mg/L	108	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00340 mg/L	0.004 mg/L	85.1	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0486 mg/L	0.04 mg/L	122	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00457 mg/L	0.004 mg/L	114	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0151 mg/L	0.02 mg/L	75.5	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0406 mg/L	0.04 mg/L	101	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0245 mg/L	0.02 mg/L	123	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00520 mg/L	0.004 mg/L	130	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.376 mg/L	0.4 mg/L	94.1	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0514 mg/L	0.04 mg/L	128	70.0	130	----
Dissolved Metals (QCLot: 1834048)										
VA25A0056-002	WLNG EOP	Mercury, dissolved	7439-97-6	E509	0.0000799 mg/L	0 mg/L	79.9	70.0	130	----
Speciated Metals (QCLot: 1829684)										
VA25A0056-002	WLNG EOP	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.263 mg/L	0.25 mg/L	105	70.0	130	----
Aggregate Organics (QCLot: 1831307)										
EO2500033-015	Anonymous	Phenols, total (4AAP)	----	E562	0.0209 mg/L	0.02 mg/L	104	75.0	125	----
Volatile Organic Compounds (QCLot: 1829686)										
VA25A0143-001	Anonymous	Benzene	71-43-2	E611C	85.1 µg/L	100 µg/L	85.1	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	87.7 µg/L	100 µg/L	87.7	60.0	140	----
		Bromoform	75-25-2	E611C	99.7 µg/L	100 µg/L	99.7	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	93.6 µg/L	100 µg/L	93.6	60.0	140	----
		Chlorobenzene	108-90-7	E611C	96.6 µg/L	100 µg/L	96.6	60.0	140	----
		Chloroethane	75-00-3	E611C	107 µg/L	100 µg/L	107	50.0	150	----
		Chloroform	67-66-3	E611C	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Chloromethane	74-87-3	E611C	93.7 µg/L	100 µg/L	93.7	50.0	150	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1829686) - continued										
VA25A0143-001	Anonymous	Dibromochloromethane	124-48-1	E611C	98.9 µg/L	100 µg/L	98.9	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	104 µg/L	100 µg/L	104	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	89.6 µg/L	100 µg/L	89.6	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	85.6 µg/L	100 µg/L	85.6	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	86.0 µg/L	100 µg/L	86.0	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	83.4 µg/L	100 µg/L	83.4	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	91.2 µg/L	100 µg/L	91.2	60.0	140	----
		Dichloromethane	75-09-2	E611C	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	83.5 µg/L	100 µg/L	83.5	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Ethylbenzene	100-41-4	E611C	89.4 µg/L	100 µg/L	89.4	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		Styrene	100-42-5	E611C	89.9 µg/L	100 µg/L	89.9	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	99.1 µg/L	100 µg/L	99.1	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		Toluene	108-88-3	E611C	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	96.3 µg/L	100 µg/L	96.3	60.0	140	----
		Trichloroethylene	79-01-6	E611C	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	102 µg/L	100 µg/L	102	50.0	150	----
		Vinyl chloride	75-01-4	E611C	93.9 µg/L	100 µg/L	93.9	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	203 µg/L	200 µg/L	102	60.0	140	----
		Xylene, o-	95-47-6	E611C	87.3 µg/L	100 µg/L	87.3	60.0	140	----
Hydrocarbons (QCLot: 1829685)										
VA25A0056-002	WLNG EOP	VHw (C6-C10)	----	E581.VH+F1	4980 µg/L	6310 µg/L	78.9	60.0	140	----

Qualifiers

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



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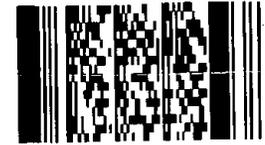
Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20

Page of

Environmental Division
Vancouver
Work Order Reference
VA25A0056



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HERE

Report To Contact and company name below will appear on the final report		Reports / Recipients			Turnaround Time (TAT) Request																																																																																		
Company: Triton Environmental		Select Report Format: <input type="checkbox"/> PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			<input checked="" type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges																																																																																		
Contact:		Merge QC/QCI Reports with COA <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A			<input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surc																																																																																		
Phone:		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			<input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surc																																																																																		
Street:		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			<input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surc																																																																																		
City/Province:					<input type="checkbox"/> 1 day [E] if received by 3pm M-F - 100% rush surc																																																																																		
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Invoice To		Same as Report To <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.																																																																																		
Company:		Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Date and Time Required for all E&P TATs: 16 - JAN - 25																																																																																		
Contact:					For all tests with rush TATs requested, please contact your AM to confirm availability.																																																																																		
Project Information		Analysis Request																																																																																					
ALS Account # / Quote #: VA23-TRIT100-012		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																																																					
Job #: 11964		<table border="1"> <thead> <tr> <th rowspan="2">NUMBER OF CONTAINERS</th> <th colspan="16">Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below</th> <th rowspan="2">SAMPLES ON HOLD</th> <th rowspan="2">EXTENDED STORAGE REQUIRED</th> <th rowspan="2">SUSPECTED HAZARD (see notes)</th> </tr> <tr> <th>Total metals + mercury</th> <th>Dissolved metals + mercury</th> <th>Total hexavalent chromium</th> <th>Total trivalent chromium</th> <th>TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)</th> <th>Total sulfide (low) (as H2S)</th> <th>Un-ionized Sulfide (low)</th> <th>Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)</th> <th>VOC/VPH</th> <th>EPH, PAH, LEPH/HEPH</th> <th>DOC</th> <th>Glycols</th> <th>General parameters (alkalinity)</th> <th>Phenols</th> </tr> </thead> <tbody> <tr> <td>16</td> <td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td></td><td></td><td></td> </tr> <tr> <td>16</td> <td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td></td><td></td><td></td> </tr> </tbody> </table>												NUMBER OF CONTAINERS	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)	Total metals + mercury	Dissolved metals + mercury	Total hexavalent chromium	Total trivalent chromium	TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)	Total sulfide (low) (as H2S)	Un-ionized Sulfide (low)	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)	VOC/VPH	EPH, PAH, LEPH/HEPH	DOC	Glycols	General parameters (alkalinity)	Phenols	16	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R				16	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R			
NUMBER OF CONTAINERS	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)																																																																				
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16	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R																																																																							
16	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R																																																																							
PO / AFE: 11964 - Task 40 - Phase 3C-4C																																																																																							
LSD:																																																																																							
ALS Lab Work Order # (ALS use only):																																																																																							
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type																																																																																			
	WLNG EOP	02-JAN-25	10:54	Water																																																																																			
	pH: 7.80 cond: 163 µS/cm temp: 9.5 °C																																																																																						
	WLNG EOP	01-JAN-25	11:07	Water																																																																																			
	pH: 7.28 cond: 180.2 µS/cm temp: 9.1 °C																																																																																						
Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)			SAMPLE RECEIPT DETAILS (ALS use only)																																																																																		
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Jan 1 - metals + mercury preserved. Jan 2 - not preserved. ESDAT EDD to ESDat_CA@tritonenv@ESdatLabSync.net			Cooling Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input checked="" type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED																																																																																		
Are samples for human consumption/ use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO																																																																																		
					Cooler Custody Seals Intact: <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A																																																																																		
					INITIAL COOLER TEMPERATURES °C						FINAL COOLER TEMPERATURES °C																																																																												
											5 9																																																																												
CLIENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)						FINAL SHIPMENT RECEPTION (ALS use only)																																																																															
Re		Date: 2 Jan 25	Time: 14:15	Received by:	Date:	Time:	Date: 2/1/25	Time: 2:20																																																																															
REF		WHITE - LABORATORY COPY						YELLOW - CLIENT																																																																															

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

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

CERTIFICATE OF ANALYSIS

Work Order : **VA25A0143**
 Client :
 Contact :
 Address :
 Telephone :
 Project :
 PO :
 C-O-C number : ----
 Sampler : ----
 Site : Water Analysis
 Quote number : VA23-TRIT100-012
 No. of samples received : 1
 No. of samples analysed : 1

Laboratory :
 Account Manager :
 Address :
 Telephone :
 Date Samples Received : 03-Jan-2025 16:01
 Date Analysis Commenced : 03-Jan-2025
 Issue Date : 10-Jan-2025 09:05

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>
		Metals, Burnaby, British Columbia
		Organics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Administration, Burnaby, British Columbia
		Inorganics, Edmonton, Alberta
		Metals, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Organics, Burnaby, British Columbia



General Comments

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

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

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

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

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

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

<: less than.

>: greater than.

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

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

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

Qualifiers

<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					03-Jan-2025 10:09	---	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0143-001	---	---	---	---	---
					Result	---	---	---	---	---
Field Tests										
Conductivity, field	---	EF001/VA	0.10	µS/cm	170.00	---	---	---	---	---
pH, field	---	EF001/VA	0.10	pH units	7.78	---	---	---	---	---
Temperature, field	---	EF001/VA	0.10	°C	9.20	---	---	---	---	---
Physical Tests										
Hardness (as CaCO3), dissolved	---	EC100/VA	0.60	mg/L	56.3	---	---	---	---	---
Hardness (as CaCO3), from total Ca/Mg	---	EC100A/VA	0.60	mg/L	58.3	---	---	---	---	---
Solids, total dissolved [TDS]	---	E162/VA	10	mg/L	88	---	---	---	---	---
Solids, total suspended [TSS]	---	E160/VA	3.0	mg/L	<3.0	---	---	---	---	---
Alkalinity, total (as CaCO3)	---	E290/VA	2.0	mg/L	58.6	---	---	---	---	---
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0151	---	---	---	---	---
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	8.12	---	---	---	---	---
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.208	---	---	---	---	---
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.0191	---	---	---	---	---
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	<0.0010	---	---	---	---	---
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	0.264	---	---	---	---	---
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0066	---	---	---	---	---
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	7.19	---	---	---	---	---
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	---	E358-L/VA	0.50	mg/L	0.64	---	---	---	---	---



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	03-Jan-2025 10:09	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0143-001	----	----	----	----	----
						Result	----	----	----	----
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	----	----	----	----	----
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	----	----	----	----	----
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	----	----	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0358	----	----	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	0.00053	----	----	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00106	----	----	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00434	----	----	----	----	----
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	0.015	----	----	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000100 ^{DLM}	----	----	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	21.6	----	----	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000018	----	----	----	----	----
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	0.00096	----	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	<0.010	----	----	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000273	----	----	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0054	----	----	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	1.06	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	---	---	---	---
					Client sampling date / time	03-Jan-2025 10:09	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0143-001	---	---	---	---	
						Result	---	---	---	---
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00439	---	---	---	---	
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L	<0.0000050	---	---	---	---	
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.0212	---	---	---	---	
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L	<0.00050	---	---	---	---	
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L	<0.050	---	---	---	---	
Potassium, total	7440-09-7	E420/VA	0.050	mg/L	1.70	---	---	---	---	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00300	---	---	---	---	
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	<0.000050	---	---	---	---	
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	5.45	---	---	---	---	
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	---	---	---	---	
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	6.06	---	---	---	---	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0435	---	---	---	---	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	2.36	---	---	---	---	
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L	<0.00020	---	---	---	---	
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L	0.000011	---	---	---	---	
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L	<0.00010	---	---	---	---	
Tin, total	7440-31-5	E420/VA	0.00010	mg/L	<0.00010	---	---	---	---	
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L	<0.00030	---	---	---	---	
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	0.00091	---	---	---	---	
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.00292	---	---	---	---	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	---	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	03-Jan-2025 10:09	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0143-001	----	----	----	----	----
						Result	----	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	0.0222	----	----	----	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0226	----	----	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	0.00058	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	0.00090	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00418	----	----	----	----	----
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	0.016	----	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000100 ^{DLM}	----	----	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	20.8	----	----	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	0.000022	----	----	----	----	----
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	0.00108	----	----	----	----	----
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	0.0058	----	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	1.06	----	----	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00500	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	03-Jan-2025 10:09	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0143-001	----	----	----	----	
					Result	----	----	----	----	
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L	<0.0000050	----	----	----	----	
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	0.0216	----	----	----	----	
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L	<0.050	----	----	----	----	
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L	1.73	----	----	----	----	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00303	----	----	----	----	
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	0.000086	----	----	----	----	
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	5.39	----	----	----	----	
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000020 ^{DLM}	----	----	----	----	
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	6.38	----	----	----	----	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0434	----	----	----	----	
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	2.07	----	----	----	----	
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	0.00094	----	----	----	----	
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L	0.00289	----	----	----	----	
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L	0.0219	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	03-Jan-2025 10:09	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0143-001	----	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	<0.00020	----	----	----	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	----	----	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-	Field	----	----	----	----	----
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	----	----	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	----	----	----	----	----
Aggregate Organics										
Phenols, total (4AAP)	----	E562/EO	0.0010	mg/L	<0.0010	----	----	----	----	----
Volatile Organic Compounds										
Chlorobenzene	108-90-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Chloromethane	74-87-3	E611C/VA	5.0	µg/L	<5.0	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611C/VA	0.75	µg/L	<0.75	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C/VA	0.20	µg/L	<0.20	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Trichlorofluoromethane	75-69-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	03-Jan-2025 10:09	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0143-001	----	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds [Drycleaning]										
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	----	----	----	----	----
Volatile Organic Compounds [Fuels]										
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	----	----	----	----	----
Toluene	108-88-3	E611CVA	0.40	µg/L	<0.40	----	----	----	----	----
Xylene, m+p-	179601-23-1	E611CVA	0.40	µg/L	<0.40	----	----	----	----	----
Xylene, o-	95-47-6	E611CVA	0.30	µg/L	<0.30	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	03-Jan-2025 10:09	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0143-001	----	----	----	----	
						Result	----	----	----	----
Volatile Organic Compounds [Fuels]										
Xylenes, total	1330-20-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Volatile Organic Compounds [THMs]										
Bromodichloromethane	75-27-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Bromoform	75-25-2	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Chloroform	67-66-3	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Dibromochloromethane	124-48-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Hydrocarbons										
EPH (C10-C19)	----	E601A/VA	250	µg/L	<250	----	----	----	----	
EPH (C19-C32)	----	E601A/VA	250	µg/L	<250	----	----	----	----	
VHw (C6-C10)	----	E581.VH+F1/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	----	----	----	----	
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%	90.9	----	----	----	----	
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/V A	1.0	%	104	----	----	----	----	
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%	82.5	----	----	----	----	
Difluorobenzene, 1,4-	540-36-3	E611C/VA	1.0	%	98.8	----	----	----	----	
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	03-Jan-2025 10:09	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0143-001	----	----	----	----	
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Acridine	260-94-6	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Anthracene	120-12-7	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L	<0.0050	----	----	----	----	
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L	<0.015	----	----	----	----	
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Chrysene	218-01-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L	<0.0050	----	----	----	----	
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Fluorene	86-73-7	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L	0.014	----	----	----	----	
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L	0.012	----	----	----	----	
Naphthalene	91-20-3	E641A/VA	0.050	µg/L	<0.050	----	----	----	----	
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L	<0.020	----	----	----	----	
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	---	---	---	---
					Client sampling date / time	03-Jan-2025 10:09	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0143-001	---	---	---	---	---
						Result	---	---	---	---
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	76.4	---	---	---	---	---
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	86.7	---	---	---	---	---
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	81.2	---	---	---	---	---
Glycols										
Diethylene glycol	111-46-6	E680E/VA	5.0	mg/L	<5.0	---	---	---	---	---
Ethylene glycol	107-21-1	E680E/VA	5.0	mg/L	<5.0	---	---	---	---	---
Propylene glycol, 1,2-	57-55-6	E680E/VA	5.0	mg/L	<5.0	---	---	---	---	---
Triethylene glycol	112-27-6	E680E/VA	5.0	mg/L	<5.0	---	---	---	---	---
Glycols, total (EG+DEG+PG)	---	E680E/VA	10	mg/L	<10	---	---	---	---	---
Glycols Surrogates										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%	96.4	---	---	---	---	---

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

QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : VA25A0143</p> <p>Client : [REDACTED]</p> <p>Contact : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Project : [REDACTED]</p> <p>PO : [REDACTED]</p> <p>C-O-C number : ----</p> <p>Sampler : ----</p> <p>Site : Water Analysis</p> <p>Quote number : VA23-TRIT100-012_V2</p> <p>No. of samples received : 1</p> <p>No. of samples analysed : 1</p>	<p>Page : 1 of 15</p> <p>Laboratory : [REDACTED]</p> <p>Account Manager : [REDACTED]</p> <p>Address : [REDACTED]</p> <p>Telephone : [REDACTED]</p> <p>Date Samples Received : 03-Jan-2025 16:01</p> <p>Issue Date : 10-Jan-2025 09:04</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 Duplicate outliers occur.
- Method Blank value outliers occur - please see following pages for full details.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Method Blank (MB) Values								
Total Metals	QC-MRG2-1830426 001	----	Manganese, total	7439-96-5	E420	0.00012 ^B mg/L	0.0001 mg/L	Blank result exceeds permitted value

Result Qualifiers

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

Laboratory Control Sample (LCS) Recoveries								
Total Metals	QC-MRG2-1830426 002	----	Phosphorus, total	7723-14-0	E420	123 % ^{MES}	80.0-120%	Recovery greater than upper control limit

Result Qualifiers

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

Matrix Spike (MS) Recoveries								
Total Metals	Anonymous	Anonymous	Thorium, total	7440-29-1	E420	69.2 % ^{MES}	70.0-130%	Recovery less than lower data quality objective
Dissolved Metals	VA25A0143-001	WLNG EOP	Silver, dissolved	7440-22-4	E421	54.3 % ^{MS-Ag}	70.0-130%	Recovery less than lower data quality objective
Dissolved Metals	VA25A0143-001	WLNG EOP	Thorium, dissolved	7440-29-1	E421	61.3 % ^{MES}	70.0-130%	Recovery less than lower data quality objective

Result Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-Ag	MS-Ag: Matrix Spike recovery for silver was marginally below DQO (40 to <60%) due to its instability in the sample matrix. Silver was not detected. Reported result (< LOR) is reliable



Analysis Holding Time Compliance

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

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

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

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

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry											
Amber glass total (sulfuric acid) WLNG EOP	E562	03-Jan-2025	08-Jan-2025	28 days	5 days	✔	09-Jan-2025	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) WLNG EOP	E298	03-Jan-2025	05-Jan-2025	28 days	2 days	✔	07-Jan-2025	28 days	4 days	✔	
Anions and Nutrients : Bromide in Water by IC (Low Level)											
HDPE WLNG EOP	E235.Br-L	03-Jan-2025	03-Jan-2025	28 days	0 days	✔	03-Jan-2025	28 days	0 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE WLNG EOP	E235.Cl	03-Jan-2025	03-Jan-2025	28 days	0 days	✔	03-Jan-2025	28 days	0 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE WLNG EOP	E235.F	03-Jan-2025	03-Jan-2025	28 days	0 days	✔	03-Jan-2025	28 days	0 days	✔	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO3-L	03-Jan-2025	03-Jan-2025	3 days	0 days	✔	03-Jan-2025	3 days	0 days	✔	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO2-L	03-Jan-2025	03-Jan-2025	3 days	0 days	✔	03-Jan-2025	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		
Anions and Nutrients : Sulfate in Water by IC											
HDPE WLNG EOP	E235.SO4	03-Jan-2025	03-Jan-2025	28 days	0 days	✓	03-Jan-2025	28 days	0 days	✓	
Anions and Nutrients : Total Nitrogen by Colourimetry											
Amber glass total (sulfuric acid) WLNG EOP	E366	03-Jan-2025	05-Jan-2025	28 days	2 days	✓	06-Jan-2025	28 days	3 days	✓	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)											
Amber glass total (sulfuric acid) WLNG EOP	E372-U	03-Jan-2025	05-Jan-2025	28 days	2 days	✓	07-Jan-2025	28 days	4 days	✓	
Dissolved Metals : Dissolved Mercury in Water by CVAAS											
Glass vial dissolved (hydrochloric acid) WLNG EOP	E509	03-Jan-2025	09-Jan-2025	28 days	6 days	✓	09-Jan-2025	28 days	6 days	✓	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) WLNG EOP	E421	03-Jan-2025	07-Jan-2025	180 days	4 days	✓	09-Jan-2025	180 days	6 days	✓	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine											
Glass vial dissolved (hydrochloric acid) WLNG EOP	EF001	03-Jan-2025	----	----	----		07-Jan-2025	----	4 days		
Glycols : Glycols (4 analytes) by GC-FID											
Glass vial WLNG EOP	E680E	03-Jan-2025	05-Jan-2025	7 days	2 days	✓	06-Jan-2025	40 days	1 days	✓	
Hydrocarbons : BC PHCs - EPH by GC-FID											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E601A	03-Jan-2025	07-Jan-2025	14 days	4 days	✓	09-Jan-2025	40 days	2 days	✓	
Hydrocarbons : VH and F1 by Headspace GC-FID											
Glass vial (sodium bisulfate) WLNG EOP	E581.VH+F1	03-Jan-2025	04-Jan-2025	14 days	1 days	✓	04-Jan-2025	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		
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)											
Amber glass dissolved (sulfuric acid) WLNG EOP	E358-L	03-Jan-2025	05-Jan-2025	28 days	2 days	✓	05-Jan-2025	28 days	2 days	✓	
Physical Tests : Alkalinity Species by Titration											
HDPE WLNG EOP	E290	03-Jan-2025	03-Jan-2025	14 days	0 days	✓	04-Jan-2025	14 days	1 days	✓	
Physical Tests : TDS by Gravimetry											
HDPE WLNG EOP	E162	03-Jan-2025	----	----	----		06-Jan-2025	7 days	3 days	✓	
Physical Tests : TSS by Gravimetry											
HDPE WLNG EOP	E160	03-Jan-2025	----	----	----		06-Jan-2025	7 days	3 days	✓	
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	03-Jan-2025	07-Jan-2025	14 days	4 days	✓	07-Jan-2025	40 days	0 days	✓	
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC											
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	03-Jan-2025	----	----	----		04-Jan-2025	28 days	1 days	✓	
Total Metals : Total Mercury in Water by CVAAS											
Glass vial total (hydrochloric acid) WLNG EOP	E508	03-Jan-2025	10-Jan-2025	28 days	7 days	✓	10-Jan-2025	28 days	7 days	✓	
Total Metals : Total Metals in Water by CRC ICPMS											
HDPE total (nitric acid) WLNG EOP	E420	03-Jan-2025	07-Jan-2025	180 days	4 days	✓	09-Jan-2025	180 days	6 days	✓	
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)											
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	03-Jan-2025	----	----	----		06-Jan-2025	7 days	3 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate) WLNQ EOP	E611C	03-Jan-2025	04-Jan-2025	14 days	1 days	✔	04-Jan-2025	14 days	1 days	✔

Legend & Qualifier Definitions

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



Quality Control Parameter Frequency Compliance

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

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

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1829549	1	16	6.2	5.0	✔
Ammonia by Fluorescence	E298	1830161	1	17	5.8	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1829554	1	9	11.1	5.0	✔
Chloride in Water by IC	E235.Cl	1829553	1	9	11.1	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830439	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1830158	1	9	11.1	5.0	✔
Fluoride in Water by IC	E235.F	1829552	1	9	11.1	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829555	1	10	10.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829556	1	16	6.2	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✔
Sulfate in Water by IC	E235.SO4	1829557	1	9	11.1	5.0	✔
TDS by Gravimetry	E162	1830479	1	8	12.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1834848	1	15	6.6	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1830426	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1830159	1	4	25.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1830160	1	7	14.2	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
TSS by Gravimetry	E160	1830476	1	17	5.8	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	5.0	✔
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1829549	1	16	6.2	5.0	✔
Ammonia by Fluorescence	E298	1830161	1	17	5.8	5.0	✔
BC PHCs - EPH by GC-FID	E601A	1831981	1	8	12.5	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1829554	1	9	11.1	5.0	✔
Chloride in Water by IC	E235.Cl	1829553	1	9	11.1	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830439	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1830158	1	9	11.1	5.0	✔
Fluoride in Water by IC	E235.F	1829552	1	9	11.1	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829555	1	10	10.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829556	1	16	6.2	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
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
PAHs in Water by Hexane LVI GC-MS	E641A	1831980	1	15	6.6	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1829557	1	9	11.1	5.0	✓
TDS by Gravimetry	E162	1830479	1	8	12.5	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1834848	1	15	6.6	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830426	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1830159	1	4	25.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1830160	1	7	14.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1830476	1	17	5.8	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1829549	1	16	6.2	5.0	✓
Ammonia by Fluorescence	E298	1830161	1	17	5.8	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1831981	1	8	12.5	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1829554	1	9	11.1	5.0	✓
Chloride in Water by IC	E235.Cl	1829553	1	9	11.1	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1830439	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1830158	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1829552	1	9	11.1	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829555	1	10	10.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829556	1	16	6.2	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1831980	1	15	6.6	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1829557	1	9	11.1	5.0	✓
TDS by Gravimetry	E162	1830479	1	8	12.5	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1834848	1	15	6.6	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830426	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1830159	1	4	25.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1830160	1	7	14.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1830476	1	17	5.8	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	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>							
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1830161	1	17	5.8	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1829554	1	9	11.1	5.0	✔
Chloride in Water by IC	E235.Cl	1829553	1	9	11.1	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830439	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1830158	1	9	11.1	5.0	✔
Fluoride in Water by IC	E235.F	1829552	1	9	11.1	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829555	1	10	10.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829556	1	16	6.2	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✔
Sulfate in Water by IC	E235.SO4	1829557	1	9	11.1	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1834848	1	15	6.6	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1830426	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1830159	1	4	25.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1830160	1	7	14.2	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1829685	1	8	12.5	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1829686	1	11	9.0	5.0	✔



Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$, 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 ₂ . 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 ₂ S" if reported represent the maximum possible H ₂ S concentration based on the total sulfide concentration in the sample. The H ₂ S calculation converts Total Sulphide as (S ₂ ⁻) and reports it as Total Sulphide as (H ₂ 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 ₃ Fe(CN) ₆) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
VH and F1 by Headspace GC-FID	E581.VH+F1 ALS Environmental - Vancouver	Water	BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod)	Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
BC PHCs - EPH by GC-FID	E601A ALS Environmental - Vancouver	Water	BC MOE Lab Manual	Sample extracts are analyzed by GC-FID for BC hydrocarbon fractions.
VOCs (BC List) by Headspace GC-MS	E611C ALS Environmental - Vancouver	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Total Xylenes is the sum of m,p-Xylene & o-Xylene. Total BTEX is the sum of Benzene, Toluene, Ethylbenzene, & Total Xylenes. Total BTEX+Styrene is the sum of Total BTEX & Styrene. Total Trihalomethanes [THMs] is the sum of Bromodichloromethane, Bromoform, Chloroform, & Dibromochloromethane.
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Vancouver	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
Glycols (4 analytes) by GC-FID	E680E ALS Environmental - Vancouver	Water	EPA 8015D (mod)	Derivatized glycols are analyzed by GC-FID.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. 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 ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ ,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ 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 ₃ .
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	: VA25A0143	Page	: 1 of 23
Client		Laboratory	
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project		Date Samples Received : 03-Jan-2025 16:01	
PO	Date Analysis Commenced : 03-Jan-2025		
C-O-C number	: ----	Issue Date	: 10-Jan-2025 09:04
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA23-TRIT100-012_V2		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

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

Signatories

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

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

Page : 2 of 23
Work Order : VA25A0143
Client : Triton Environmental Consultants Ltd.
Project : 11964



General Comments

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

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1829549)											
VA25A0138-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	229	229	0.0436%	20%	----
Physical Tests (QC Lot: 1830476)											
VA25A0105-002	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	45.4	49.4	8.44%	20%	----
Physical Tests (QC Lot: 1830479)											
KS2500012-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	154	148	5	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829552)											
FJ2500011-001	Anonymous	Fluoride	16984-48-8	E235.F	0.400	mg/L	<0.400	<0.400	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829553)											
FJ2500011-001	Anonymous	Chloride	16887-00-6	E235.Cl	10.0	mg/L	40.1	40.3	0.19	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829554)											
FJ2500011-001	Anonymous	Bromide	24959-67-9	E235.Br-L	1.00	mg/L	<1.00	<1.00	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829555)											
FJ2500011-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.100	mg/L	30.3	30.6	1.04%	20%	----
Anions and Nutrients (QC Lot: 1829556)											
FJ2500011-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0200	mg/L	0.0618	0.0664	0.0045	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829557)											
FJ2500011-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	6.00	mg/L	987	997	0.963%	20%	----
Anions and Nutrients (QC Lot: 1830159)											
VA25A0084-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.617	0.620	0.456%	20%	----
Anions and Nutrients (QC Lot: 1830160)											
VA25A0084-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0325	0.0318	2.21%	20%	----
Anions and Nutrients (QC Lot: 1830161)											
VA25A0079-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0662	0.0673	1.72%	20%	----
Organic / Inorganic Carbon (QC Lot: 1830158)											
VA25A0084-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	15.9	16.9	5.92%	20%	----
Total Sulfides (QC Lot: 1830800)											
TY2500054-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0257	0.0247	4.09%	20%	----
Total Metals (QC Lot: 1830426)											
VA25A0111-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0378	0.0413	8.73%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----



Sub-Matrix: **Water**

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1830426) - continued											
VA25A0111-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00044	0.00046	0.00002	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0190	0.0188	1.40%	20%	----
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	16.8	16.8	0.0353%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.000050	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	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.039	0.046	0.007	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.100	mg/L	2.79	2.87	2.61%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00623	0.00647	3.72%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000605	0.000596	1.52%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.300	mg/L	<0.300	<0.300	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	0.552	0.571	3.34%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00029	0.00030	0.00001	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000052	<0.000050	0.000002	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	4.70	4.72	0.466%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	3.67	3.68	0.491%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.114	0.114	0.00894%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	2.09	2.27	0.18	Diff <2x LOR	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.0100	mg/L	<0.0100	<0.0100	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	0.000080	0.000078	0.000002	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1830426) - continued											
VA25A0111-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1834848)											
VA25A0104-005	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1830439)											
VA25A0128-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0035	0.0029	0.0007	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00045	0.00044	0.00001	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00140	0.00137	2.02%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0482	0.0494	2.32%	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	0.053	0.049	0.003	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.000290	0.000269	7.66%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	328	318	2.97%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000188	0.000183	2.94%	20%	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00220	0.00219	0.710%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00345	0.00333	3.74%	20%	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.022	0.018	0.004	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	0.0056	0.0053	0.0003	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	94.9	95.5	0.627%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	2.93	3.05	3.94%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000676	0.000641	5.39%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00323	0.00329	0.00006	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	9.79	9.79	0.0620%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00575	0.00580	0.957%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000176	0.000139	0.000037	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.55	3.33	6.54%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	26.1	26.1	0.0668%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.936	0.945	0.993%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	417	392	6.19%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1830439) - continued											
VA25A0128-001	Anonymous	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	0.000013	0.000012	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	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000533	0.000518	2.80%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	0	Diff <2x LOR	----	
Dissolved Metals (QC Lot: 1834048)											
VA25A0056-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1829684)											
VA25A0056-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1832577)											
HA2500015-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	0.0449	0.0457	1.68%	20%	----
Volatile Organic Compounds (QC Lot: 1829686)											
VA25A0056-001	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	----
		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	<1.0	0	Diff <2x LOR



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1829686) - continued											
VA25A0056-001	Anonymous	Dichloropropane, 1,2-	78-87-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
Xylene, o-	95-47-6	E611C	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----		
Hydrocarbons (QC Lot: 1829685)											
VA25A0056-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1830136)											
VA25A0023-001	Anonymous	Diethylene glycol	111-46-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Ethylene glycol	107-21-1	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Propylene glycol, 1,2-	57-55-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Triethylene glycol	112-27-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----



Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1829549)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1830476)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1830479)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1829552)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1829553)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1829554)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1829555)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1829556)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1829557)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1830159)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1830160)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1830161)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 1830158)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1830800)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1830426)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1830426) - continued						
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	# 0.00012	B
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1834848)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1830439)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1830439) - continued						
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1834048)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1829684)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1832577)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1829686)						
Benzene	71-43-2	E611C	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611C	0.5	µg/L	<0.50	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	<0.50	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611C	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611C	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611C	5	µg/L	<5.0	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611C	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	<0.50	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1829686) - continued						
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	<0.50	---
Styrene	100-42-5	E611C	0.5	µg/L	<0.50	---
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	<0.50	---
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	<0.20	---
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	<0.50	---
Toluene	108-88-3	E611C	0.4	µg/L	<0.40	---
Trichloroethane, 1,1,1,-	71-55-6	E611C	0.5	µg/L	<0.50	---
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	<0.50	---
Trichloroethylene	79-01-6	E611C	0.5	µg/L	<0.50	---
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	<0.50	---
Vinyl chloride	75-01-4	E611C	0.4	µg/L	<0.40	---
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	<0.40	---
Xylene, o-	95-47-6	E611C	0.3	µg/L	<0.30	---
Hydrocarbons (QCLot: 1829685)						
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	<100	---
Hydrocarbons (QCLot: 1831981)						
EPH (C10-C19)	---	E601A	250	µg/L	<250	---
EPH (C19-C32)	---	E601A	250	µg/L	<250	---
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	---
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	---
Acridine	260-94-6	E641A	0.01	µg/L	<0.010	---
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	---
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	---
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	---
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	---
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	---
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	---
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	---
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	---
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	---
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	---
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	---
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	---
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	---



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980) - continued						
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A	0.05	µg/L	<0.050	----
Glycols (QCLot: 1830136)						
Diethylene glycol	111-46-6	E680E	5	mg/L	<5.0	----
Ethylene glycol	107-21-1	E680E	5	mg/L	<5.0	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	<5.0	----
Triethylene glycol	112-27-6	E680E	5	mg/L	<5.0	----

Qualifiers

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



Laboratory Control Sample (LCS) Report

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

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1829549)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1830476)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	96.7	85.0	115	----
Physical Tests (QCLot: 1830479)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	93.4	85.0	115	----
Anions and Nutrients (QCLot: 1829552)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1829553)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1829554)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	106	85.0	115	----
Anions and Nutrients (QCLot: 1829555)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1829556)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1829557)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 1830159)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1830160)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	92.4	80.0	120	----
Anions and Nutrients (QCLot: 1830161)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	92.4	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1830158)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	97.1	80.0	120	----
Total Sulfides (QCLot: 1830800)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	103	80.0	120	----
Total Metals (QCLot: 1830426)									



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830426) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	112	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	113	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	118	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	115	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	104	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	108	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	98.8	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	112	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	106	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	110	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	111	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	111	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	111	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	112	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	107	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	104	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	109	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	111	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	112	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	108	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	# 123	80.0	120	MES
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	114	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	117	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	108	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	114	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	102	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	113	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	108	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	104	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	119	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	108	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	103	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	111	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	113	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	114	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	108	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830426) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	112	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	104	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	112	80.0	120	----
Total Metals (QCLot: 1834848)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	94.5	80.0	120	----
Dissolved Metals (QCLot: 1830439)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	108	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	102	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	107	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	106	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	103	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	107	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	104	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	98.5	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	100.0	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	100	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	99.9	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	93.2	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	106	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	108	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	107	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	98.2	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	102	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	102	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	104	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	107	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	101	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	110	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	94.2	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	107	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	99.9	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	92.1	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1830439) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	99.9	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	103	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	102	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	106	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	102	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	105	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	113	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	103	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	100	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	81.5	80.0	120	----
Speciated Metals (QCLot: 1829684)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	99.4	80.0	120	----
Aggregate Organics (QCLot: 1832577)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	105	85.0	115	----
Volatile Organic Compounds (QCLot: 1829686)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	89.7	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	89.4	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	97.8	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	94.2	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	97.0	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	112	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	92.7	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	98.7	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	97.1	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	97.2	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	100	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	100 µg/L	92.3	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	87.2	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	89.8	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	88.2	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	91.4	70.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1829686) - continued									
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	97.3	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	90.8	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	88.9	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	93.7	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	92.8	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	97.6	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	96.4	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	96.9	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	94.6	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	98.0	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	90.6	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	103	60.0	140	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	101	60.0	140	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	200 µg/L	100	70.0	130	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	91.0	70.0	130	----
Hydrocarbons (QCLot: 1829685)									
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	6310 µg/L	75.8	70.0	130	----
Hydrocarbons (QCLot: 1831981)									
EPH (C10-C19)	---	E601A	250	µg/L	6490 µg/L	100	70.0	130	----
EPH (C19-C32)	---	E601A	250	µg/L	3360 µg/L	103	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	95.5	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	97.6	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	114	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	96.6	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	91.6	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	97.9	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	103	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	128	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	107	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
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980) - continued									
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	104	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	108	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	97.9	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	114	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	85.8	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	90.1	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	96.4	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	104	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	105	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	111	60.0	130	----
Glycols (QCLot: 1830136)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	94.4	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	94.5	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	92.8	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	92.8	70.0	130	----



Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1829552)										
FJ2500011-002	Anonymous	Fluoride	16984-48-8	E235.F	21.0 mg/L	20 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1829553)										
FJ2500011-002	Anonymous	Chloride	16887-00-6	E235.Cl	2100 mg/L	2000 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1829554)										
FJ2500011-002	Anonymous	Bromide	24959-67-9	E235.Br-L	11.0 mg/L	10 mg/L	110	75.0	125	----
Anions and Nutrients (QCLot: 1829555)										
FJ2500011-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	52.5 mg/L	50 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1829556)										
FJ2500011-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	10.5 mg/L	10 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1829557)										
FJ2500011-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	2040 mg/L	2000 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1830159)										
VA25A0084-002	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1830160)										
VA25A0084-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1830161)										
VA25A0084-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0897 mg/L	0.1 mg/L	89.7	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1830158)										
VA25A0084-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Total Sulfides (QCLot: 1830800)										
TY2500054-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.222 mg/L	0.2 mg/L	111	75.0	125	----
Total Metals (QCLot: 1830426)										
VA25A0111-002	Anonymous	Aluminum, total	7429-90-5	E420	0.206 mg/L	0.2 mg/L	103	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0200 mg/L	0.02 mg/L	99.9	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0395 mg/L	0.04 mg/L	98.8	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00980 mg/L	0.01 mg/L	98.0	70.0	130	----
		Boron, total	7440-42-8	E420	0.096 mg/L	0.1 mg/L	96.3	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00412 mg/L	0.004 mg/L	103	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	0.0396 mg/L	0.04 mg/L	99.0	70.0	130	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1830426) - continued										
VA25A0111-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0201 mg/L	0.02 mg/L	100	70.0	130	----
		Copper, total	7440-50-8	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Iron, total	7439-89-6	E420	1.99 mg/L	2 mg/L	99.6	70.0	130	----
		Lead, total	7439-92-1	E420	0.0195 mg/L	0.02 mg/L	97.4	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0960 mg/L	0.1 mg/L	96.0	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0195 mg/L	0.02 mg/L	97.4	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0198 mg/L	0.02 mg/L	99.2	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0392 mg/L	0.04 mg/L	98.1	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.8 mg/L	10 mg/L	108	70.0	130	----
		Potassium, total	7440-09-7	E420	4.00 mg/L	4 mg/L	100.0	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0209 mg/L	0.02 mg/L	105	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0398 mg/L	0.04 mg/L	99.6	70.0	130	----
		Silicon, total	7440-21-3	E420	9.35 mg/L	10 mg/L	93.5	70.0	130	----
		Silver, total	7440-22-4	E420	0.00393 mg/L	0.004 mg/L	98.2	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	20.0 mg/L	20 mg/L	99.9	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00384 mg/L	0.004 mg/L	96.0	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0138 mg/L	0.02 mg/L	69.2	70.0	130	MES
		Tin, total	7440-31-5	E420	0.0197 mg/L	0.02 mg/L	98.4	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0421 mg/L	0.04 mg/L	105	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0203 mg/L	0.02 mg/L	102	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00398 mg/L	0.004 mg/L	99.5	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.100 mg/L	0.1 mg/L	100	70.0	130	----
		Zinc, total	7440-66-6	E420	0.379 mg/L	0.4 mg/L	94.8	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0400 mg/L	0.04 mg/L	100	70.0	130	----
Total Metals (QCLot: 1834848)										
VA25A0112-003	Anonymous	Mercury, total	7439-97-6	E508	0.00189 mg/L	0.002 mg/L	94.5	70.0	130	----
Dissolved Metals (QCLot: 1830439)										
VA25A0143-001	WLNG EOP	Aluminum, dissolved	7429-90-5	E421	0.208 mg/L	0.2 mg/L	104	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0199 mg/L	0.02 mg/L	99.4	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0210 mg/L	0.02 mg/L	105	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0199 mg/L	0.02 mg/L	99.7	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0422 mg/L	0.04 mg/L	106	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0101 mg/L	0.01 mg/L	101	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.106 mg/L	0.1 mg/L	106	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00396 mg/L	0.004 mg/L	99.0	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00980 mg/L	0.01 mg/L	98.0	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0400 mg/L	0.04 mg/L	100	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0197 mg/L	0.02 mg/L	98.7	70.0	130	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1830439) - continued										
VA25A0143-001	WLNG EOP	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	1.94 mg/L	2 mg/L	96.9	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.104 mg/L	0.1 mg/L	104	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0183 mg/L	0.02 mg/L	91.7	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	ND mg/L	----	ND	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0398 mg/L	0.04 mg/L	99.4	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.1 mg/L	10 mg/L	101	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	3.98 mg/L	4 mg/L	99.4	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0205 mg/L	0.02 mg/L	102	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0395 mg/L	0.04 mg/L	98.8	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.77 mg/L	10 mg/L	97.7	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00217 mg/L	0.004 mg/L	54.3	70.0	130	MS-Ag
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	19.1 mg/L	20 mg/L	95.4	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0399 mg/L	0.04 mg/L	99.8	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00399 mg/L	0.004 mg/L	99.8	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0123 mg/L	0.02 mg/L	61.3	70.0	130	MES
		Tin, dissolved	7440-31-5	E421	0.0198 mg/L	0.02 mg/L	99.3	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0199 mg/L	0.02 mg/L	99.7	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00449 mg/L	0.004 mg/L	112	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.387 mg/L	0.4 mg/L	96.6	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0396 mg/L	0.04 mg/L	99.1	70.0	130	----
Dissolved Metals (QCLot: 1834048)										
VA25A0056-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000799 mg/L	0 mg/L	79.9	70.0	130	----
Speciated Metals (QCLot: 1829684)										
VA25A0056-002	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.263 mg/L	0.25 mg/L	105	70.0	130	----
Aggregate Organics (QCLot: 1832577)										
VA25A0143-001	WLNG EOP	Phenols, total (4AAP)	----	E562	0.0216 mg/L	0.02 mg/L	108	75.0	125	----
Volatile Organic Compounds (QCLot: 1829686)										
VA25A0143-001	WLNG EOP	Benzene	71-43-2	E611C	85.1 µg/L	100 µg/L	85.1	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	87.7 µg/L	100 µg/L	87.7	60.0	140	----
		Bromoform	75-25-2	E611C	99.7 µg/L	100 µg/L	99.7	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	93.6 µg/L	100 µg/L	93.6	60.0	140	----
		Chlorobenzene	108-90-7	E611C	96.6 µg/L	100 µg/L	96.6	60.0	140	----
		Chloroethane	75-00-3	E611C	107 µg/L	100 µg/L	107	50.0	150	----
		Chloroform	67-66-3	E611C	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Chloromethane	74-87-3	E611C	93.7 µg/L	100 µg/L	93.7	50.0	150	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1829686) - continued										
VA25A0143-001	WLNG EOP	Dibromochloromethane	124-48-1	E611C	98.9 µg/L	100 µg/L	98.9	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	104 µg/L	100 µg/L	104	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	89.6 µg/L	100 µg/L	89.6	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	85.6 µg/L	100 µg/L	85.6	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	86.0 µg/L	100 µg/L	86.0	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	83.4 µg/L	100 µg/L	83.4	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	91.2 µg/L	100 µg/L	91.2	60.0	140	----
		Dichloromethane	75-09-2	E611C	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	83.5 µg/L	100 µg/L	83.5	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Ethylbenzene	100-41-4	E611C	89.4 µg/L	100 µg/L	89.4	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		Styrene	100-42-5	E611C	89.9 µg/L	100 µg/L	89.9	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	99.1 µg/L	100 µg/L	99.1	60.0	140	----
		Tetrachloroethane, 1,1,1,2,2-	79-34-5	E611C	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		Toluene	108-88-3	E611C	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	96.3 µg/L	100 µg/L	96.3	60.0	140	----
		Trichloroethylene	79-01-6	E611C	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	102 µg/L	100 µg/L	102	50.0	150	----
		Vinyl chloride	75-01-4	E611C	93.9 µg/L	100 µg/L	93.9	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	203 µg/L	200 µg/L	102	60.0	140	----
		Xylene, o-	95-47-6	E611C	87.3 µg/L	100 µg/L	87.3	60.0	140	----
Hydrocarbons (QCLot: 1829685)										
VA25A0056-002	Anonymous	VHw (C6-C10)	----	E581.VH+F1	4980 µg/L	6310 µg/L	78.9	60.0	140	----

Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-Ag	MS-Ag: Matrix Spike recovery for silver was marginally below DQO (40 to <60%) due to its instability in the sample matrix. Silver was not detected. Reported result (< LOR) is reliable



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Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

Page of

Canada Toll Free: 1 800 668 9878

Report To Contact and company name below will appear on the final report		Reports / Recipients			Turnaround Time (TAT) Requested				AFFIX ALS BARCODE LABEL HERE (ALS use only)																																																																																																																																																																																						
Company: Contact: Phone: Street: City/Province: Postal Code:		Select Report Format: <input type="checkbox"/> PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Merge QC/QCI Reports with COA <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax Email 2 Email 3			<input checked="" type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum <input type="checkbox"/> 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum <input type="checkbox"/> Same day [E2] if received by 10am M-S - 200% rush surcharge.																																																																																																																																																																																										
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Company: Contact:		Email 1 or Fax Email 2			For all tests with rush TATs requested, please contact your AM to confirm availability.				Analysis Request																																																																																																																																																																																						
Project Information		Oil and Gas Request Note (optional)			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below				NUMBER OF CONTAINERS																																																																																																																																																																																						
ALS Account # / Quote #: VA23-TRIT100-012		AFE/Cost Center: PO#			<table border="1"> <thead> <tr> <th></th> <th>F</th> <th></th> <th></th> <th>P</th> <th>P</th> <th>P</th> <th>P</th> <th>F/P</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Total metals + mercury</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Dissolved metals + mercury</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total hexavalent chromium</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total trivalent chromium</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total sulfide (low) (as H2S)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Unionized Sulfide (low)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>VOC/MPH</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>EPH, PAH, LEPH/HEPH</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DOC</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Glycols</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>General parameters (alkalinity)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Phenols</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								F			P	P	P	P	F/P				Total metals + mercury												Dissolved metals + mercury												Total hexavalent chromium												Total trivalent chromium												TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)												Total sulfide (low) (as H2S)												Unionized Sulfide (low)												Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)												VOC/MPH												EPH, PAH, LEPH/HEPH												DOC												Glycols												General parameters (alkalinity)												Phenols											
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ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)	Time (hh:mm)	Sample Type																																																																																																																																																																																									
	WLNQ EOP			03-JAN-25	10:09	Water	16	R	R	R	R	R	R	R	R	R	R	R	R	R	R																																																																																																																																																																										
	pH: 7.78 cond: 170 µS/cm temp: 9.2 °C																																																																																																																																																																																														

Environmental Division
Vancouver
Work Order Reference
VA25A0143



Telephone: +1 604 253 4168

SAMPLE RECEIPT DETAILS (ALS use only)

NONE ICE ICE PACKS FROZEN COOLING INITIATED

Comments identified on Sample Receipt Notification: YES NO

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

INITIAL COOLER TEMPERATURES °C: 6 FINAL COOLER TEMPERATURES °C: 6

SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)				FINAL SHIPMENT RECEPTION (ALS use only)					
Time: 4:00		Received by:		Date:		Time: mt		Date: 3/2/25		Time: 2:00	

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.
1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

CERTIFICATE OF ANALYSIS

Work Order : **VA25A0167**
 Client : 
 Contact : 
 Address : 
 Telephone : 
 Project : 
 PO : 
 C-O-C number : ----
 Sampler : ----
 Site : Water Analysis
 Quote number : VA23-TRIT100-012
 No. of samples received : 1
 No. of samples analysed : 1

Laboratory : 
 Account Manager : 
 Address : 
 Telephone : 
 Date Samples Received : 04-Jan-2025 15:07
 Date Analysis Commenced : 04-Jan-2025
 Issue Date : 10-Jan-2025 09:06

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	Position	Laboratory Department
		



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	04-Jan-2025 11:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0167-001	----	----	----	----	
Result						----	----	----	----	
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm	195.00	----	----	----	----	
pH, field	----	EF001/VA	0.10	pH units	7.20	----	----	----	----	
Temperature, field	----	EF001/VA	0.10	°C	9.40	----	----	----	----	
Turbidity, field	----	EF001/VA	0.01	NTU	0.13	----	----	----	----	
Physical Tests										
Hardness (as CaCO ₃), dissolved	----	EC100/VA	0.60	mg/L	58.0	----	----	----	----	
Hardness (as CaCO ₃), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	58.7	----	----	----	----	
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	96	----	----	----	----	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	----	----	----	----	
Alkalinity, total (as CaCO ₃)	----	E290/VA	2.0	mg/L	55.3	----	----	----	----	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0198	----	----	----	----	
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	11.7	----	----	----	----	
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.195	----	----	----	----	
Nitrate (as N)	14797-55-8	E235.NO ₃ -L/VA	0.0050	mg/L	0.0194	----	----	----	----	
Nitrite (as N)	14797-65-0	E235.NO ₂ -L/VA	0.0010	mg/L	<0.0010	----	----	----	----	
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	0.248	----	----	----	----	
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0085	----	----	----	----	
Sulfate (as SO ₄)	14808-79-8	E235.SO ₄ /VA	0.30	mg/L	7.26	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	04-Jan-2025 11:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0167-001	----	----	----	----	
						Result	----	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-LVA	0.50	mg/L	0.82	----	----	----	----	
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	----	----	----	----	
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	----	----	----	----	
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	----	----	----	----	
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0350	----	----	----	----	
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	0.00087	----	----	----	----	
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00084	----	----	----	----	
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00463	----	----	----	----	
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L	<0.000100	----	----	----	----	
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L	<0.000050	----	----	----	----	
Boron, total	7440-42-8	E420/VA	0.010	mg/L	0.018	----	----	----	----	
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000150 ^{DLM}	----	----	----	----	
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	21.9	----	----	----	----	
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000024	----	----	----	----	
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	0.00117	----	----	----	----	
Iron, total	7439-89-6	E420/VA	0.010	mg/L	0.010	----	----	----	----	
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000301	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	---	---	---	---
					Client sampling date / time	04-Jan-2025 11:05	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0167-001	---	---	---	---	
					Result	---	---	---	---	
Total Metals										
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0061	---	---	---	---	
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	0.985	---	---	---	---	
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00571	---	---	---	---	
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L	<0.0000050	---	---	---	---	
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.0232	---	---	---	---	
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L	<0.00050	---	---	---	---	
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L	<0.050	---	---	---	---	
Potassium, total	7440-09-7	E420/VA	0.050	mg/L	2.04	---	---	---	---	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00303	---	---	---	---	
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	0.000076	---	---	---	---	
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	5.55	---	---	---	---	
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	---	---	---	---	
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	7.22	---	---	---	---	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0463	---	---	---	---	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	2.53	---	---	---	---	
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L	<0.00020	---	---	---	---	
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L	0.000012	---	---	---	---	
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	0.00234	---	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	04-Jan-2025 11:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0167-001	----	----	----	----	
					Result	----	----	----	----	
Total Metals										
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.00168	----	----	----	----	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	0.0221	----	----	----	----	
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0220	----	----	----	----	
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	0.00082	----	----	----	----	
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	0.00079	----	----	----	----	
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00437	----	----	----	----	
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	0.018	----	----	----	----	
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000100 ^{DLM}	----	----	----	----	
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	21.6	----	----	----	----	
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	0.000021	----	----	----	----	
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	0.00096	----	----	----	----	
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	<0.010	----	----	----	----	
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	0.000228	----	----	----	----	
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	0.0062	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	---	---	---	---
					Client sampling date / time	04-Jan-2025 11:05	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0167-001	---	---	---	---	---
						Result	---	---	---	---
Dissolved Metals										
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	1.00	---	---	---	---	---
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00560	---	---	---	---	---
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L	<0.0000050	---	---	---	---	---
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	0.0222	---	---	---	---	---
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	2.12	---	---	---	---	---
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00318	---	---	---	---	---
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	0.000080	---	---	---	---	---
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	5.38	---	---	---	---	---
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000010	---	---	---	---	---
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	7.23	---	---	---	---	---
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0466	---	---	---	---	---
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	2.22	---	---	---	---	---
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L	<0.00020	---	---	---	---	---
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L	0.000012	---	---	---	---	---
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	0.00222	---	---	---	---	---
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L	0.00160	---	---	---	---	---



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	04-Jan-2025 11:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0167-001	----	----	----	----	
						Result	----	----	----	----
Dissolved Metals										
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L	0.0224	----	----	----	----	
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	<0.00020	----	----	----	----	
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	----	----	----	----	
Dissolved metals filtration location	----	EP421/VA	-	-	Field	----	----	----	----	
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Aggregate Organics										
Phenols, total (4AAP)	----	E562/EO	0.0010	mg/L	<0.0010	----	----	----	----	
Volatile Organic Compounds										
Chlorobenzene	108-90-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Chloromethane	74-87-3	E611C/VA	5.0	µg/L	<5.0	----	----	----	----	
Dichlorobenzene, 1,2-	95-50-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Dichlorobenzene, 1,3-	541-73-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Dichlorobenzene, 1,4-	106-46-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Dichloropropane, 1,2-	78-87-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Dichloropropylene, cis-1,3-	10061-01-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Dichloropropylene, cis+trans-1,3-	542-75-6	E611C/VA	0.75	µg/L	<0.75	----	----	----	----	
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C/VA	0.20	µg/L	<0.20	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	04-Jan-2025 11:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0167-001	----	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds										
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	----	----	----	----	----
Volatile Organic Compounds [Drycleaning]										
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	----	----	----	----	----
Volatile Organic Compounds [Fuels]										
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	04-Jan-2025 11:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0167-001	----	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds [Fuels]										
Toluene	108-88-3	E611C/VA	0.40	µg/L	<0.40	----	----	----	----	----
Xylene, m+p-	179601-23-1	E611C/VA	0.40	µg/L	<0.40	----	----	----	----	----
Xylene, o-	95-47-6	E611C/VA	0.30	µg/L	<0.30	----	----	----	----	----
Xylenes, total	1330-20-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Volatile Organic Compounds [THMs]										
Bromodichloromethane	75-27-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Bromoform	75-25-2	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Chloroform	67-66-3	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dibromochloromethane	124-48-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Hydrocarbons										
EPH (C10-C19)	----	E601A/VA	250	µg/L	<250	----	----	----	----	----
EPH (C19-C32)	----	E601A/VA	250	µg/L	<250	----	----	----	----	----
VHw (C6-C10)	----	E581.VH+F1/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	----	----	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%	83.8	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/V A	1.0	%	106	----	----	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%	96.4	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	04-Jan-2025 11:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0167-001	----	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds Surrogates										
Difluorobenzene, 1,4-	540-36-3	E611CVA	1.0	%	104	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Acridine	260-94-6	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Anthracene	120-12-7	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L	<0.0050	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L	<0.015	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Chrysene	218-01-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L	<0.0050	----	----	----	----	----
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Fluorene	86-73-7	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L	0.011	----	----	----	----	----
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	04-Jan-2025 11:05	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0167-001	----	----	----	----	----
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	82.7	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	87.4	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	83.7	----	----	----	----	----
Glycols										
Diethylene glycol	111-46-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Ethylene glycol	107-21-1	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Propylene glycol, 1,2-	57-55-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Triethylene glycol	112-27-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Glycols, total (EG+DEG+PG)	----	E680E/VA	10	mg/L	<10	----	----	----	----	----
Glycols Surrogates										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%	98.7	----	----	----	----	----

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

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: VA25A0167	Page	: 1 of 14
Client	[REDACTED]	Laboratory	[REDACTED]
Contact	[REDACTED]	Account Manager	[REDACTED]
Address	[REDACTED]	Address	[REDACTED]
Telephone	[REDACTED]	Telephone	[REDACTED]
Project	[REDACTED]	Date Samples Received	: 04-Jan-2025 15:07
PO	[REDACTED]	Issue Date	: 10-Jan-2025 09:05
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA23-TRIT100-012_V2		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

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



Analysis Holding Time Compliance

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

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

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

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

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times Rec Actual		Eval	Analysis Date	Holding Times Rec Actual		Eval	
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry											
Amber glass total (sulfuric acid) WLNG EOP	E562	04-Jan-2025	08-Jan-2025	28 days	4 days	✔	09-Jan-2025	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) WLNG EOP	E298	04-Jan-2025	05-Jan-2025	28 days	1 days	✔	07-Jan-2025	28 days	3 days	✔	
Anions and Nutrients : Bromide in Water by IC (Low Level)											
HDPE WLNG EOP	E235.Br-L	04-Jan-2025	04-Jan-2025	28 days	0 days	✔	04-Jan-2025	28 days	0 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE WLNG EOP	E235.Cl	04-Jan-2025	04-Jan-2025	28 days	0 days	✔	04-Jan-2025	28 days	0 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE WLNG EOP	E235.F	04-Jan-2025	04-Jan-2025	28 days	0 days	✔	04-Jan-2025	28 days	0 days	✔	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO3-L	04-Jan-2025	04-Jan-2025	3 days	0 days	✔	04-Jan-2025	3 days	0 days	✔	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO2-L	04-Jan-2025	04-Jan-2025	3 days	0 days	✔	04-Jan-2025	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		
Anions and Nutrients : Sulfate in Water by IC											
HDPE WLNG EOP	E235.SO4	04-Jan-2025	04-Jan-2025	28 days	0 days	✓	04-Jan-2025	28 days	0 days	✓	
Anions and Nutrients : Total Nitrogen by Colourimetry											
Amber glass total (sulfuric acid) WLNG EOP	E366	04-Jan-2025	05-Jan-2025	28 days	1 days	✓	06-Jan-2025	28 days	2 days	✓	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)											
Amber glass total (sulfuric acid) WLNG EOP	E372-U	04-Jan-2025	05-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	3 days	✓	
Dissolved Metals : Dissolved Mercury in Water by CVAAS											
Glass vial dissolved (hydrochloric acid) WLNG EOP	E509	04-Jan-2025	07-Jan-2025	28 days	3 days	✓	07-Jan-2025	28 days	3 days	✓	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) WLNG EOP	E421	04-Jan-2025	05-Jan-2025	180 days	1 days	✓	06-Jan-2025	180 days	2 days	✓	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine											
Glass vial dissolved (hydrochloric acid) WLNG EOP	EF001	04-Jan-2025	----	----	----		07-Jan-2025	----	3 days		
Glycols : Glycols (4 analytes) by GC-FID											
Glass vial WLNG EOP	E680E	04-Jan-2025	05-Jan-2025	7 days	1 days	✓	06-Jan-2025	40 days	1 days	✓	
Hydrocarbons : BC PHCs - EPH by GC-FID											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E601A	04-Jan-2025	07-Jan-2025	14 days	3 days	✓	09-Jan-2025	40 days	2 days	✓	
Hydrocarbons : VH and F1 by Headspace GC-FID											
Glass vial (sodium bisulfate) WLNG EOP	E581.VH+F1	04-Jan-2025	08-Jan-2025	14 days	4 days	✓	08-Jan-2025	14 days	4 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WLNG EOP	E358-L	04-Jan-2025	05-Jan-2025	28 days	1 days	✓	05-Jan-2025	28 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG EOP	E290	04-Jan-2025	04-Jan-2025	14 days	0 days	✓	05-Jan-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG EOP	E162	04-Jan-2025	----	----	----		05-Jan-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG EOP	E160	04-Jan-2025	----	----	----		05-Jan-2025	7 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	04-Jan-2025	07-Jan-2025	14 days	3 days	✓	07-Jan-2025	40 days	0 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	04-Jan-2025	----	----	----		07-Jan-2025	28 days	3 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG EOP	E508	04-Jan-2025	07-Jan-2025	28 days	3 days	✓	07-Jan-2025	28 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG EOP	E420	04-Jan-2025	05-Jan-2025	180 days	1 days	✓	06-Jan-2025	180 days	2 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	04-Jan-2025	----	----	----		05-Jan-2025	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	
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate) W LNG EOP	E611C	04-Jan-2025	08-Jan-2025	14 days	4 days	✔	08-Jan-2025	14 days	4 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
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1830039	1	15	6.6	5.0	✓
Ammonia by Fluorescence	E298	1830161	1	17	5.8	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1830043	1	15	6.6	5.0	✓
Chloride in Water by IC	E235.Cl	1830042	1	15	6.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1831042	1	13	7.6	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1830178	1	1	100.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1830158	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1830041	1	15	6.6	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1830044	1	15	6.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1830045	1	15	6.6	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1830046	1	15	6.6	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1831030	1	13	7.6	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830177	1	1	100.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1830159	1	4	25.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1830160	1	7	14.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1830039	1	15	6.6	5.0	✓
Ammonia by Fluorescence	E298	1830161	1	17	5.8	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1831981	1	8	12.5	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1830043	1	15	6.6	5.0	✓
Chloride in Water by IC	E235.Cl	1830042	1	15	6.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1831042	1	13	7.6	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1830178	1	1	100.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1830158	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1830041	1	15	6.6	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1830044	1	15	6.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1830045	1	15	6.6	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
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
PAHs in Water by Hexane LVI GC-MS	E641A	1831980	1	15	6.6	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1830046	1	15	6.6	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1831030	1	13	7.6	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830177	1	1	100.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1830159	1	4	25.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1830160	1	7	14.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1830039	1	15	6.6	5.0	✓
Ammonia by Fluorescence	E298	1830161	1	17	5.8	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1831981	1	8	12.5	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1830043	1	15	6.6	5.0	✓
Chloride in Water by IC	E235.Cl	1830042	1	15	6.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1831042	1	13	7.6	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1830178	1	1	100.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1830158	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1830041	1	15	6.6	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1830136	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1830044	1	15	6.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1830045	1	15	6.6	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1831980	1	15	6.6	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1830046	1	15	6.6	5.0	✓
TDS by Gravimetry	E162	1830078	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1831030	1	13	7.6	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830177	1	1	100.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1830159	1	4	25.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1830160	1	7	14.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✓
TSS by Gravimetry	E160	1830076	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✓



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

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1830161	1	17	5.8	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1830043	1	15	6.6	5.0	✔
Chloride in Water by IC	E235.Cl	1830042	1	15	6.6	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1831042	1	13	7.6	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830178	0	1	0.0	5.0	✘
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1830158	1	9	11.1	5.0	✔
Fluoride in Water by IC	E235.F	1830041	1	15	6.6	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1830044	1	15	6.6	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1830045	1	15	6.6	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✔
Sulfate in Water by IC	E235.SO4	1830046	1	15	6.6	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✔
Total Mercury in Water by CVAAS	E508	1831030	1	13	7.6	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1830177	0	1	0.0	5.0	✘
Total Nitrogen by Colourimetry	E366	1830159	1	4	25.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1830160	1	7	14.2	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830140	1	6	16.6	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✔



Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$, 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 ₂ . 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 ₂ S" if reported represent the maximum possible H ₂ S concentration based on the total sulfide concentration in the sample. The H ₂ S calculation converts Total Sulphide as (S ₂ ⁻) and reports it as Total Sulphide as (H ₂ 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 ₃ Fe(CN) ₆) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
VH and F1 by Headspace GC-FID	E581.VH+F1 ALS Environmental - Vancouver	Water	BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod)	Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
BC PHCs - EPH by GC-FID	E601A ALS Environmental - Vancouver	Water	BC MOE Lab Manual	Sample extracts are analyzed by GC-FID for BC hydrocarbon fractions.
VOCs (BC List) by Headspace GC-MS	E611C ALS Environmental - Vancouver	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Total Xylenes is the sum of m,p-Xylene & o-Xylene. Total BTEX is the sum of Benzene, Toluene, Ethylbenzene, & Total Xylenes. Total BTEX+Styrene is the sum of Total BTEX & Styrene. Total Trihalomethanes [THMs] is the sum of Bromodichloromethane, Bromoform, Chloroform, & Dibromochloromethane.
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Vancouver	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
Glycols (4 analytes) by GC-FID	E680E ALS Environmental - Vancouver	Water	EPA 8015D (mod)	Derivatized glycols are analyzed by GC-FID.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. 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 ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ ,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ 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 ₃ .
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	: VA25A0167	Page	: 1 of 21
Client		Laboratory	
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project		Date Samples Received	
PO	Date Analysis Commenced	: 04-Jan-2025	
C-O-C number		Issue Date	: 10-Jan-2025 09:05
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA23-TRIT100-012_V2		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

This Quality Control Report contains the following information:

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

Signatories

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

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

Page : 2 of 21
Work Order : VA25A0167
Client : Triton Environmental Consultants Ltd.
Project : 11964



General Comments

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

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1830039)											
FJ2500013-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	111	112	0.540%	20%	----
Physical Tests (QC Lot: 1830076)											
VA24D4481-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1830078)											
VA24D4481-001	Anonymous	Solids, total dissolved [TDS]	----	E162	13	mg/L	44	48	4	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1830041)											
FJ2500013-001	Anonymous	Fluoride	16984-48-8	E235.F	0.100	mg/L	0.301	0.307	0.006	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1830042)											
FJ2500013-001	Anonymous	Chloride	16887-00-6	E235.Cl	2.50	mg/L	39.9	39.9	0.0720%	20%	----
Anions and Nutrients (QC Lot: 1830043)											
FJ2500013-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.250	mg/L	0.550	0.555	0.005	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1830044)											
FJ2500013-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0250	mg/L	0.291	0.292	0.442%	20%	----
Anions and Nutrients (QC Lot: 1830045)											
FJ2500013-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0050	mg/L	0.0069	0.0066	0.0002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1830046)											
FJ2500013-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	311	312	0.383%	20%	----
Anions and Nutrients (QC Lot: 1830159)											
VA25A0084-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.617	0.620	0.456%	20%	----
Anions and Nutrients (QC Lot: 1830160)											
VA25A0084-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0325	0.0318	2.21%	20%	----
Anions and Nutrients (QC Lot: 1830161)											
VA25A0079-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0662	0.0673	1.72%	20%	----
Organic / Inorganic Carbon (QC Lot: 1830158)											
VA25A0084-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	15.9	16.9	5.92%	20%	----
Total Sulfides (QC Lot: 1830140)											
VA24D4481-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	<0.0015	0	Diff <2x LOR	----
Total Metals (QC Lot: 1830177)											
VA25A0167-001	WLNG EOP	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0350	0.0330	5.94%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00087	0.00086	0.000006	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1830177) - continued											
VA25A0167-001	WLNG EOP	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00084	0.00088	0.00004	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.00463	0.00460	0.512%	20%	----
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.018	0.018	0.00003	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000150	mg/L	<0.0000150	<0.0000150	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	21.9	21.4	2.00%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000024	0.000024	0.0000003	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	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.000050	mg/L	0.00117	0.00114	0.00003	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.010	0.011	0.0010	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000301	0.000303	0.000002	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0061	0.0062	0.00002	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.985	0.994	0.931%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00571	0.00562	1.57%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.0232	0.0232	0.00189%	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	2.04	2.09	2.14%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00303	0.00324	6.46%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000076	0.000062	0.000014	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	5.55	5.40	2.72%	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	7.22	7.35	1.71%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0463	0.0460	0.588%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	2.53	2.22	0.31	Diff <2x LOR	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000012	0.000012	0.0000006	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	0.00234	0.00234	0.196%	20%	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00168	0.00169	0.902%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1830177) - continued											
VA25A0167-001	WLNG EOP	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	0.0221	0.0225	0.0004	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1831030)											
FJ2403912-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1830178)											
VA25A0167-001	WLNG EOP	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0220	0.0219	0.544%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00082	0.00084	0.00002	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00079	0.00084	0.00005	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00437	0.00439	0.486%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.018	0.018	0.00002	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000100	mg/L	<0.0000100	<0.0000100	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	21.6	22.1	1.91%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000021	0.000021	0.0000002	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00096	0.00097	0.00001	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	0.000228	0.000235	0.000007	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0062	0.0062	0.00006	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.00	0.996	0.536%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00560	0.00578	3.26%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.0222	0.0224	0.484%	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	2.12	2.10	1.45%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00318	0.00309	2.82%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000080	<0.000050	0.000030	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	5.38	5.28	1.85%	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	7.23	7.25	0.231%	20%	----
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0466	0.0457	1.94%	20%	----		



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1830178) - continued											
VA25A0167-001	W LNG EOP	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	2.22	2.09	0.13	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.000012	0.000012	0.0000002	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	0.00222	0.00226	2.07%	20%	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00160	0.00162	1.76%	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	0.0224	0.0222	0.946%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1831042)											
FJ2403912-008	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1832247)											
FJ2403883-013	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1832577)											
HA2500015-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	0.0449	0.0457	1.68%	20%	----
Volatile Organic Compounds (QC Lot: 1832575)											
VA25A0167-001	W LNG EOP	Benzene	71-43-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611C	5.0	µg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1832575) - continued											
VA25A0167-001	W LNG EOP	Dichloroethylene, trans-1,2-	156-60-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611C	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
Xylene, o-	95-47-6	E611C	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----		
Hydrocarbons (QC Lot: 1832574)											
VA25A0167-001	W LNG EOP	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1830136)											
VA25A0023-001	Anonymous	Diethylene glycol	111-46-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Ethylene glycol	107-21-1	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Propylene glycol, 1,2-	57-55-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Triethylene glycol	112-27-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----



Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1830039)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1830076)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1830078)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1830041)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1830042)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1830043)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1830044)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1830045)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1830046)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1830159)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1830160)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1830161)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 1830158)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1830140)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1830177)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1830177) - continued						
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1831030)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	---
Dissolved Metals (QCLot: 1830178)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	---
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	---
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	---
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	---
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	---
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	---
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	---
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	---
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	---
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	---
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	---
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	---
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	---
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	---
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	---
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	---
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	---
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	---
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	---
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	---
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	---
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	---
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	---
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	---
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	---
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	---
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	---
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	---
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	---
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	---
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	---
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	---
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	---



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1830178) - continued						
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1831042)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1832247)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1832577)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1832575)						
Benzene	71-43-2	E611C	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611C	0.5	µg/L	<0.50	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	<0.50	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611C	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611C	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611C	5	µg/L	<5.0	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611C	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	<0.50	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1832575) - continued						
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611C	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	<0.20	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611C	0.4	µg/L	<0.40	----
Trichloroethane, 1,1,1,-	71-55-6	E611C	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2,-	79-00-5	E611C	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	<0.40	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 1831981)						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
Hydrocarbons (QCLot: 1832574)						
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----



Sub-Matrix: **Water**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980) - continued						
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A	0.05	µg/L	<0.050	----
Glycols (QCLot: 1830136)						
Diethylene glycol	111-46-6	E680E	5	mg/L	<5.0	----
Ethylene glycol	107-21-1	E680E	5	mg/L	<5.0	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	<5.0	----
Triethylene glycol	112-27-6	E680E	5	mg/L	<5.0	----



Laboratory Control Sample (LCS) Report

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

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1830039)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1830076)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	99.7	85.0	115	----
Physical Tests (QCLot: 1830078)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	98.6	85.0	115	----
Anions and Nutrients (QCLot: 1830041)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	99.7	90.0	110	----
Anions and Nutrients (QCLot: 1830042)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1830043)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	102	85.0	115	----
Anions and Nutrients (QCLot: 1830044)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	99.4	90.0	110	----
Anions and Nutrients (QCLot: 1830045)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	98.1	90.0	110	----
Anions and Nutrients (QCLot: 1830046)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	103	90.0	110	----
Anions and Nutrients (QCLot: 1830159)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1830160)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	92.4	80.0	120	----
Anions and Nutrients (QCLot: 1830161)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	92.4	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1830158)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	97.1	80.0	120	----
Total Sulfides (QCLot: 1830140)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	105	80.0	120	----
Total Metals (QCLot: 1830177)									



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830177) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	98.1	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	109	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	103	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	98.1	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	104	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	110	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	105	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	98.7	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	104	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	100	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	97.4	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	98.4	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	98.9	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	94.0	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	107	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	102	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	98.7	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	99.4	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	97.6	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	105	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	98.2	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	101	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	108	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	92.7	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	102	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	99.2	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	95.2	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	108	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	104	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	97.5	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	98.7	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	104	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	97.8	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
Total Metals (QCLot: 1830177) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	99.7	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	96.9	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Total Metals (QCLot: 1831030)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	99.9	80.0	120	----
Dissolved Metals (QCLot: 1830178)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	96.8	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	102	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	98.9	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	93.1	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	102	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	96.1	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	99.7	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	100	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	94.8	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	93.9	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	93.3	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	93.6	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	101	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	97.3	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	98.3	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	103	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	93.5	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	93.0	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	97.4	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	95.9	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	99.6	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	106	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	91.0	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	95.9	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	99.7	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	90.6	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1830178) - continued									
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	98.4	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	95.0	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	97.0	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	100.0	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	95.4	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	92.5	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	99.6	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	94.8	80.0	120	----
Speciated Metals (QCLot: 1832247)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Aggregate Organics (QCLot: 1832577)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	105	85.0	115	----
Volatile Organic Compounds (QCLot: 1832575)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	99.8	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	91.1	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	122	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	93.1	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	95.3	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	95.9	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	97.2	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	100 µg/L	98.9	70.0	130	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	100 µg/L	109	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	114	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	108	70.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1832575) - continued									
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	106	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	99.0	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	94.0	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	93.7	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	99.5	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	86.5	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	99.5	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	99.6	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	108	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	95.2	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	124	60.0	140	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	103	60.0	140	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	200 µg/L	99.2	70.0	130	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	93.7	70.0	130	----
Hydrocarbons (QCLot: 1831981)									
EPH (C10-C19)	---	E601A	250	µg/L	6490 µg/L	100	70.0	130	----
EPH (C19-C32)	---	E601A	250	µg/L	3360 µg/L	103	70.0	130	----
Hydrocarbons (QCLot: 1832574)									
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	6310 µg/L	76.8	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	95.5	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	97.6	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	114	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	96.6	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	91.6	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	97.9	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	103	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	128	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	107	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
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980) - continued									
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	104	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	108	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	97.9	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	114	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	85.8	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	90.1	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	96.4	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	104	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	105	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	111	60.0	130	----
Glycols (QCLot: 1830136)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	94.4	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	94.5	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	92.8	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	92.8	70.0	130	----



Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1830041)										
FJ2500013-002	Anonymous	Fluoride	16984-48-8	E235.F	4.96 mg/L	5 mg/L	99.2	75.0	125	----
Anions and Nutrients (QCLot: 1830042)										
FJ2500013-002	Anonymous	Chloride	16887-00-6	E235.Cl	502 mg/L	500 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1830043)										
FJ2500013-002	Anonymous	Bromide	24959-67-9	E235.Br-L	2.66 mg/L	2.5 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1830044)										
FJ2500013-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	12.5 mg/L	12.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1830045)										
FJ2500013-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.49 mg/L	2.5 mg/L	99.7	75.0	125	----
Anions and Nutrients (QCLot: 1830046)										
FJ2500013-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	500 mg/L	500 mg/L	100.0	75.0	125	----
Anions and Nutrients (QCLot: 1830159)										
VA25A0084-002	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1830160)										
VA25A0084-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1830161)										
VA25A0084-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0897 mg/L	0.1 mg/L	89.7	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1830158)										
VA25A0084-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Total Sulfides (QCLot: 1830140)										
VA24D4481-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.241 mg/L	0.2 mg/L	120	75.0	125	----
Total Metals (QCLot: 1831030)										
FJ2403912-005	Anonymous	Mercury, total	7439-97-6	E508	0.000987 mg/L	0 mg/L	98.7	70.0	130	----
Dissolved Metals (QCLot: 1831042)										
KS2405363-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.000952 mg/L	0 mg/L	95.2	70.0	130	----
Speciated Metals (QCLot: 1832247)										
FJ2403883-014	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.264 mg/L	0.25 mg/L	106	70.0	130	----
Aggregate Organics (QCLot: 1832577)										
VA25A0143-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0216 mg/L	0.02 mg/L	108	75.0	125	----
Volatile Organic Compounds (QCLot: 1832575)										



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1832575) - continued										
VA25A0169-001	Anonymous	Benzene	71-43-2	E611C	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Bromoform	75-25-2	E611C	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Chlorobenzene	108-90-7	E611C	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Chloroethane	75-00-3	E611C	106 µg/L	100 µg/L	106	50.0	150	----
		Chloroform	67-66-3	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Chloromethane	74-87-3	E611C	76.7 µg/L	100 µg/L	76.7	50.0	150	----
		Dibromochloromethane	124-48-1	E611C	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	96.6 µg/L	100 µg/L	96.6	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	98.3 µg/L	100 µg/L	98.3	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	108 µg/L	100 µg/L	108	60.0	140	----
		Dichloromethane	75-09-2	E611C	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	93.5 µg/L	100 µg/L	93.5	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	87.1 µg/L	100 µg/L	87.1	60.0	140	----
		Ethylbenzene	100-41-4	E611C	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	106 µg/L	100 µg/L	106	60.0	140	----
		Styrene	100-42-5	E611C	89.4 µg/L	100 µg/L	89.4	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	99.9 µg/L	100 µg/L	99.9	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	84.4 µg/L	100 µg/L	84.4	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		Toluene	108-88-3	E611C	93.8 µg/L	100 µg/L	93.8	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Trichloroethylene	79-01-6	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	106 µg/L	100 µg/L	106	50.0	150	----
		Vinyl chloride	75-01-4	E611C	94.4 µg/L	100 µg/L	94.4	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	190 µg/L	200 µg/L	95.2	60.0	140	----
		Xylene, o-	95-47-6	E611C	89.6 µg/L	100 µg/L	89.6	60.0	140	----
Hydrocarbons (QCLot: 1832574)										
VA25A0266-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	3950 µg/L	6310 µg/L	62.6	60.0	140	----



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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20 -
Page of

Contact and company name below will appear on the final report

Reports / Recipients

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

Company: [Redacted]
Contact: [Redacted]
Street: [Redacted]
City/Province: [Redacted]
Postal Code: [Redacted]

Select Invoice: [Redacted]
Email 1 or Fax: [Redacted]
Email 2: [Redacted]
Email 3: [Redacted]

Invoice To: Same as Report To YES NO
Copy of Invoice with Report YES NO

Oil and Gas Required Fields (client use)
AFE/Cost Center: [Redacted] PO#: [Redacted]
Major/Minor Code: [Redacted] Routing Code: [Redacted]
Requisitioner: [Redacted]
Location: [Redacted]

ALS Account # / Quote #: VA23-TRIT 100-012
Job #: 11964
PO / AFE: 11964 - Task 30 - Phase 3C-4C
LSD: [Redacted]

ALS Lab Work Order # (ALS use only): [Redacted]
ALS Contact: [Redacted]
Date: [Redacted] Time: [Redacted] Sampler: [Redacted]

Sample Identification and/or Coordinates
(This description will appear on the report)
WILNG EOP
pH: 7.2 cond: 195 temp: 9.4
Turbidity: 0.13

Sample Type: Water
Date: 4-Jan-25 11:05

Drinking Water (DW) Samples (client use)
Are samples taken from a Regulated DW System? YES NO
Are samples for human consumption/ user? YES NO

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

Table with 15 columns for various parameters: Total metals + mercury, Dissolved metals + mercury, Total hexavalent chromium, Total trivalent chromium, TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4), Total sulfide (low) (as H2S), Unionized Sulfide (low), Nutrients (ammonia, ammonium, total nitrogen, total phosphorus), VOC/VPH, EPH, PAH, LEPH/HEPH, DOC, Glycols, General parameters (alkalinity), Phenols.

ESDAT EDD to ESDat_CA+tritonemv@ESDatLabsSync.net

SHIPMENT RELEASE (client use)
Time: 15:07
Received by: [Redacted]

INITIAL SHIPMENT RECEPTION (ALS use only)
Time: 15:07
Received by: [Redacted]

WHITE - LABORATORY COPY YELLOW - CLIENT COPY
REFER TO BACK PAGE FOR ALS'S LOCATIONS AND SPOTting INFORMATION
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.
1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Turnaround Time (TAT) Requested
For all tests with rush TATs requested, please contact your AM to confirm availability.
Additional fees may apply to rush requests on weekends.
Date and Time Required for all E&P TATs:
Environmental Division
Vancouver
Work Order Reference
VA25A0167
Telephone: + 1 804 263 4188

CERTIFICATE OF ANALYSIS

Work Order	: VA25A0169	Laboratory	: ALS Environmental - Vancouver
Client	: Triton Environmental Consultants Ltd.	Account Manager	
Contact		Address	
Address		Telephone	
Telephone		Date Samples Received	: 05-Jan-2025 14:45
Project	: 11964	Date Analysis Commenced	: 06-Jan-2025
PO	: 11964-Task30-Phase 3C-4C	Issue Date	: 10-Jan-2025 08:25
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA23-TRIT100-012		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
	Lab Assistant	Metals, Burnaby, British Columbia
	Supervisor - Organics Instrumentation	Organics, Burnaby, British Columbia
	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
	Department Manager - Metals	Metals, Burnaby, British Columbia
	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
	Department Manager - Organics	Organics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
	Account Manager Assistant	Administration, Burnaby, British Columbia
	Team Leader - Inorganics	Inorganics, Edmonton, Alberta
	Supervisor - Water Quality Instrumentation	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
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					05-Jan-2025 09:53	----	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0169-001	----	----	----	----	----
					Result	----	----	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm	173.00	----	----	----	----	----
pH, field	----	EF001/VA	0.10	pH units	6.20	----	----	----	----	----
Temperature, field	----	EF001/VA	0.10	°C	10.9	----	----	----	----	----
Turbidity, field	----	EF001/VA	0.01	NTU	0.8	----	----	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L	56.8	----	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	57.8	----	----	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	87	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	----	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	56.1	----	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0206	----	----	----	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L	<0.050	----	----	----	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L	7.86	----	----	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.206	----	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.0199	----	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	<0.0010	----	----	----	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	0.264	----	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0029	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	6.67	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	05-Jan-2025 09:53	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0169-001	----	----	----	----	----
						Result	----	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-LVA	0.50	mg/L	0.69	----	----	----	----	----
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	----	----	----	----	----
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	----	----	----	----	----
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	----	----	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0533	----	----	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	0.00084	----	----	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00089	----	----	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00415	----	----	----	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L	<0.000100	----	----	----	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L	<0.000050	----	----	----	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L	0.018	----	----	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000100 ^{DLM}	----	----	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	21.6	----	----	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000020	----	----	----	----	----
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	0.00122	----	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	<0.010	----	----	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000336	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	---	---	---	---
					Client sampling date / time	05-Jan-2025 09:53	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0169-001	---	---	---	---	
						Result	---	---	---	---
Total Metals										
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0056	---	---	---	---	
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	0.950	---	---	---	---	
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00444	---	---	---	---	
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L	<0.0000050	---	---	---	---	
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.0213	---	---	---	---	
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L	<0.00050	---	---	---	---	
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L	<0.050	---	---	---	---	
Potassium, total	7440-09-7	E420/VA	0.050	mg/L	2.02	---	---	---	---	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00301	---	---	---	---	
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	<0.000050	---	---	---	---	
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	5.64	---	---	---	---	
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	---	---	---	---	
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	6.32	---	---	---	---	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0418	---	---	---	---	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	2.27	---	---	---	---	
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L	<0.00020	---	---	---	---	
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L	0.000011	---	---	---	---	
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L	<0.00010	---	---	---	---	
Tin, total	7440-31-5	E420/VA	0.00010	mg/L	<0.00010	---	---	---	---	
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L	0.00035	---	---	---	---	
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	0.00185	---	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	05-Jan-2025 09:53	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0169-001	----	----	----	----	
						Result	----	----	----	----
Total Metals										
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.00240	----	----	----	----	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	0.0186	----	----	----	----	
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0263	----	----	----	----	
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	0.00085	----	----	----	----	
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	0.00085	----	----	----	----	
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00420	----	----	----	----	
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	0.017	----	----	----	----	
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000150 ^{DLM}	----	----	----	----	
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	21.1	----	----	----	----	
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	0.000021	----	----	----	----	
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	0.00101	----	----	----	----	
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	<0.010	----	----	----	----	
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	0.000229	----	----	----	----	
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	0.0054	----	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	---	---	---	---
					Client sampling date / time	05-Jan-2025 09:53	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0169-001	---	---	---	---	
					Result	---	---	---	---	
Dissolved Metals										
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	1.01	---	---	---	---	
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00446	---	---	---	---	
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L	<0.0000050	---	---	---	---	
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	0.0216	---	---	---	---	
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	2.14	---	---	---	---	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00318	---	---	---	---	
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	0.000074	---	---	---	---	
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	5.58	---	---	---	---	
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000010	---	---	---	---	
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	6.63	---	---	---	---	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0422	---	---	---	---	
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	1.86	---	---	---	---	
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L	<0.00020	---	---	---	---	
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L	0.000012	---	---	---	---	
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	0.00178	---	---	---	---	
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L	0.00223	---	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	05-Jan-2025 09:53	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0169-001	----	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L	<0.00050	----	----	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L	0.0187	----	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	<0.00020	----	----	----	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	----	----	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-	Field	----	----	----	----	----
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	----	----	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	----	----	----	----	----
Aggregate Organics										
Phenols, total (4AAP)	----	E562/EO	0.0010	mg/L	<0.0010	----	----	----	----	----
Volatile Organic Compounds										
Chlorobenzene	108-90-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Chloromethane	74-87-3	E611C/VA	5.0	µg/L	<5.0	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611C/VA	0.75	µg/L	<0.75	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C/VA	0.20	µg/L	<0.20	----	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	05-Jan-2025 09:53	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0169-001	----	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds										
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	----	----	----	----	----
Volatile Organic Compounds [Drycleaning]										
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	----	----	----	----	----
Volatile Organic Compounds [Fuels]										
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	05-Jan-2025 09:53	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0169-001	---	---	---	---	
Result						---	---	---	---	
Volatile Organic Compounds [Fuels]										
Toluene	108-88-3	E611C/VA	0.40	µg/L	<0.40	---	---	---	---	
Xylene, m+p-	179601-23-1	E611C/VA	0.40	µg/L	<0.40	---	---	---	---	
Xylene, o-	95-47-6	E611C/VA	0.30	µg/L	<0.30	---	---	---	---	
Xylenes, total	1330-20-7	E611C/VA	0.50	µg/L	<0.50	---	---	---	---	
Volatile Organic Compounds [THMs]										
Bromodichloromethane	75-27-4	E611C/VA	0.50	µg/L	<0.50	---	---	---	---	
Bromoform	75-25-2	E611C/VA	0.50	µg/L	<0.50	---	---	---	---	
Chloroform	67-66-3	E611C/VA	0.50	µg/L	<0.50	---	---	---	---	
Dibromochloromethane	124-48-1	E611C/VA	0.50	µg/L	<0.50	---	---	---	---	
Hydrocarbons										
EPH (C10-C19)	---	E601A/VA	250	µg/L	<250	---	---	---	---	
EPH (C19-C32)	---	E601A/VA	250	µg/L	<250	---	---	---	---	
VHw (C6-C10)	---	E581.VH+F1/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	---	---	---	---	
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%	80.9	---	---	---	---	
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/V A	1.0	%	103	---	---	---	---	
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%	94.7	---	---	---	---	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	05-Jan-2025 09:53	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0169-001	----	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds Surrogates										
Difluorobenzene, 1,4-	540-36-3	E611CVA	1.0	%	103	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Acridine	260-94-6	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Anthracene	120-12-7	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L	<0.0050	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L	<0.015	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Chrysene	218-01-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L	<0.0050	----	----	----	----	----
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Fluorene	86-73-7	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
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	05-Jan-2025 09:53	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0169-001	----	----	----	----	----
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	79.3	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	83.6	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	83.3	----	----	----	----	----
Glycols										
Diethylene glycol	111-46-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Ethylene glycol	107-21-1	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Propylene glycol, 1,2-	57-55-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Triethylene glycol	112-27-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----	----
Glycols, total (EG+DEG+PG)	----	E680E/VA	10	mg/L	<10	----	----	----	----	----
Glycols Surrogates										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%	110	----	----	----	----	----

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

QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : VA25A0169</p> <p>Client : Triton Environmental Consultants Ltd.</p> <p>Contact : [Redacted]</p> <p>Address : [Redacted]</p> <p>Telephone : [Redacted]</p> <p>Project : 11964</p> <p>PO : 11964-Task30-Phase 3C-4C</p> <p>C-O-C number : ----</p> <p>Sampler : ----</p> <p>Site : Water Analysis</p> <p>Quote number : VA23-TRIT100-012_V2</p> <p>No. of samples received : 1</p> <p>No. of samples analysed : 1</p>	<p>Page : 1 of 15</p> <p>Laboratory : ALS Environmental - Vancouver</p> <p>Account Manager : [Redacted]</p> <p>Address : [Redacted]</p> <p>Telephone : [Redacted]</p> <p>Date Samples Received : 05-Jan-2025 14:45</p> <p>Issue Date : 10-Jan-2025 08:24</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
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Total Metals	Anonymous	Anonymous	Thorium, total	7440-29-1	E420	64.6 % ^{MES}	70.0-130%	Recovery less than lower data quality objective

Result Qualifiers

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



Analysis Holding Time Compliance

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

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

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

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

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry											
Amber glass total (sulfuric acid) WLNG EOP	E562	05-Jan-2025	08-Jan-2025	28 days	3 days	✔	09-Jan-2025	28 days	4 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) WLNG EOP	E298	05-Jan-2025	07-Jan-2025	28 days	2 days	✔	07-Jan-2025	28 days	2 days	✔	
Anions and Nutrients : Bromide in Water by IC (Low Level)											
HDPE WLNG EOP	E235.Br-L	05-Jan-2025	06-Jan-2025	28 days	1 days	✔	06-Jan-2025	28 days	1 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE WLNG EOP	E235.Cl	05-Jan-2025	06-Jan-2025	28 days	1 days	✔	06-Jan-2025	28 days	1 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE WLNG EOP	E235.F	05-Jan-2025	06-Jan-2025	28 days	1 days	✔	06-Jan-2025	28 days	1 days	✔	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO3-L	05-Jan-2025	06-Jan-2025	3 days	1 days	✔	06-Jan-2025	3 days	1 days	✔	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE WLNG EOP	E235.NO2-L	05-Jan-2025	06-Jan-2025	3 days	1 days	✔	06-Jan-2025	3 days	1 days	✔	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Sulfate in Water by IC											
HDPE WLNG EOP	E235.SO4	05-Jan-2025	06-Jan-2025	28 days	1 days	✓	06-Jan-2025	28 days	1 days	✓	
Anions and Nutrients : Total Nitrogen by Colourimetry											
Amber glass total (sulfuric acid) WLNG EOP	E366	05-Jan-2025	07-Jan-2025	28 days	2 days	✓	07-Jan-2025	28 days	2 days	✓	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)											
Amber glass total (sulfuric acid) WLNG EOP	E372-U	05-Jan-2025	07-Jan-2025	28 days	2 days	✓	08-Jan-2025	28 days	3 days	✓	
Dissolved Metals : Dissolved Mercury in Water by CVAAS											
Glass vial dissolved (hydrochloric acid) WLNG EOP	E509	05-Jan-2025	07-Jan-2025	28 days	2 days	✓	07-Jan-2025	28 days	2 days	✓	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) WLNG EOP	E421	05-Jan-2025	06-Jan-2025	180 days	1 days	✓	07-Jan-2025	180 days	2 days	✓	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine											
Glass vial dissolved (hydrochloric acid) WLNG EOP	EF001	05-Jan-2025	----	----	----		07-Jan-2025	----	2 days		
Glycols : Glycols (4 analytes) by GC-FID											
Glass vial WLNG EOP	E680E	05-Jan-2025	08-Jan-2025	7 days	3 days	✓	09-Jan-2025	40 days	1 days	✓	
Hydrocarbons : BC PHCs - EPH by GC-FID											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E601A	05-Jan-2025	07-Jan-2025	14 days	2 days	✓	09-Jan-2025	40 days	2 days	✓	
Hydrocarbons : VH and F1 by Headspace GC-FID											
Glass vial (sodium bisulfate) WLNG EOP	E581.VH+F1	05-Jan-2025	08-Jan-2025	14 days	3 days	✓	08-Jan-2025	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	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WLNG EOP	E358-L	05-Jan-2025	07-Jan-2025	28 days	2 days	✓	07-Jan-2025	28 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG EOP	E290	05-Jan-2025	06-Jan-2025	14 days	1 days	✓	06-Jan-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG EOP	E162	05-Jan-2025	----	----	----		06-Jan-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG EOP	E160	05-Jan-2025	----	----	----		06-Jan-2025	7 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	05-Jan-2025	07-Jan-2025	14 days	2 days	✓	07-Jan-2025	40 days	0 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	05-Jan-2025	----	----	----		07-Jan-2025	28 days	3 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG EOP	E508	05-Jan-2025	07-Jan-2025	28 days	2 days	✓	07-Jan-2025	28 days	2 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG EOP	E420	05-Jan-2025	06-Jan-2025	180 days	1 days	✓	07-Jan-2025	180 days	2 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	05-Jan-2025	----	----	----		06-Jan-2025	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	
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate) WLNQ EOP	E611C	05-Jan-2025	08-Jan-2025	14 days	3 days	✔	08-Jan-2025	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
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1830575	1	5	20.0	5.0	✔
Ammonia by Fluorescence	E298	1831073	1	7	14.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1830923	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1830922	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1831042	1	13	7.6	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830725	1	4	25.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1831069	1	8	12.5	5.0	✔
Fluoride in Water by IC	E235.F	1830921	1	18	5.5	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1833169	1	4	25.0	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1830924	1	13	7.6	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1830925	1	18	5.5	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✔
Sulfate in Water by IC	E235.SO4	1830926	1	18	5.5	5.0	✔
TDS by Gravimetry	E162	1830479	1	8	12.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✔
Total Mercury in Water by CVAAS	E508	1831030	1	13	7.6	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1830723	1	4	25.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1831071	1	7	14.2	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1831072	1	7	14.2	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
TSS by Gravimetry	E160	1830476	1	17	5.8	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✔
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1830575	1	5	20.0	5.0	✔
Ammonia by Fluorescence	E298	1831073	1	7	14.2	5.0	✔
BC PHCs - EPH by GC-FID	E601A	1831981	1	8	12.5	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1830923	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1830922	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1831042	1	13	7.6	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830725	1	4	25.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1831069	1	8	12.5	5.0	✔
Fluoride in Water by IC	E235.F	1830921	1	18	5.5	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1833169	1	4	25.0	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1830924	1	13	7.6	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1830925	1	18	5.5	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
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
PAHs in Water by Hexane LVI GC-MS	E641A	1831980	1	15	6.6	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1830926	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1830479	1	8	12.5	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1831030	1	13	7.6	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830723	1	4	25.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1831071	1	7	14.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1831072	1	7	14.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1830476	1	17	5.8	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1830575	1	5	20.0	5.0	✓
Ammonia by Fluorescence	E298	1831073	1	7	14.2	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1831981	1	8	12.5	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1830923	1	18	5.5	5.0	✓
Chloride in Water by IC	E235.Cl	1830922	1	18	5.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1831042	1	13	7.6	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1830725	1	4	25.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1831069	1	8	12.5	5.0	✓
Fluoride in Water by IC	E235.F	1830921	1	18	5.5	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1833169	1	4	25.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1830924	1	13	7.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1830925	1	18	5.5	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1831980	1	15	6.6	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1830926	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1830479	1	8	12.5	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1831030	1	13	7.6	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1830723	1	4	25.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1831071	1	7	14.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1831072	1	7	14.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1830476	1	17	5.8	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✓



Matrix: **Water**

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

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1831073	1	7	14.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1830923	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1830922	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1831042	1	13	7.6	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830725	1	4	25.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1831069	1	8	12.5	5.0	✔
Fluoride in Water by IC	E235.F	1830921	1	18	5.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1830924	1	13	7.6	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1830925	1	18	5.5	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1832577	1	13	7.6	5.0	✔
Sulfate in Water by IC	E235.SO4	1830926	1	18	5.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✔
Total Mercury in Water by CVAAS	E508	1831030	1	13	7.6	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1830723	1	4	25.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1831071	1	7	14.2	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1831072	1	7	14.2	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✔



Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$, 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 ₂ . 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 ₂ S" if reported represent the maximum possible H ₂ S concentration based on the total sulfide concentration in the sample. The H ₂ S calculation converts Total Sulphide as (S ₂ ⁻) and reports it as Total Sulphide as (H ₂ 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 ₃ Fe(CN) ₆) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
VH and F1 by Headspace GC-FID	E581.VH+F1 ALS Environmental - Vancouver	Water	BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod)	Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
BC PHCs - EPH by GC-FID	E601A ALS Environmental - Vancouver	Water	BC MOE Lab Manual	Sample extracts are analyzed by GC-FID for BC hydrocarbon fractions.
VOCs (BC List) by Headspace GC-MS	E611C ALS Environmental - Vancouver	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Total Xylenes is the sum of m,p-Xylene & o-Xylene. Total BTEX is the sum of Benzene, Toluene, Ethylbenzene, & Total Xylenes. Total BTEX+Styrene is the sum of Total BTEX & Styrene. Total Trihalomethanes [THMs] is the sum of Bromodichloromethane, Bromoform, Chloroform, & Dibromochloromethane.
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Vancouver	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
Glycols (4 analytes) by GC-FID	E680E ALS Environmental - Vancouver	Water	EPA 8015D (mod)	Derivatized glycols are analyzed by GC-FID.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. 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 ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ ,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ 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 ₃ .
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 : **VA25A0169**
Client : Triton Environmental Consultants Ltd.
Contact :
Address :

Telephone :
Project : 11964
PO : 11964-Task30-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 :
Address :

Telephone :
Date Samples Received : 05-Jan-2025 14:45
Date Analysis Commenced : 06-Jan-2025
Issue Date : 10-Jan-2025 08:24

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	Position	Laboratory Department
	Lab Assistant	Vancouver Metals, Burnaby, British Columbia
	Supervisor - Organics Instrumentation	Vancouver Organics, Burnaby, British Columbia
	Supervisor - Metals ICP Instrumentation	Vancouver Metals, Burnaby, British Columbia
	Department Manager - Metals	Vancouver Metals, Burnaby, British Columbia
	Department Manager - Inorganics	Vancouver Inorganics, Burnaby, British Columbia
	Department Manager - Organics	Vancouver Organics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
	Account Manager Assistant	Vancouver Administration, Burnaby, British Columbia
	Team Leader - Inorganics	Edmonton Inorganics, Edmonton, Alberta
	Supervisor - Water Quality Instrumentation	Vancouver Inorganics, Burnaby, British Columbia

Page : 2 of 23
Work Order : VA25A0169
Client : Triton Environmental Consultants Ltd.
Project : 11964



General Comments

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

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1830476)											
VA25A0105-002	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	45.4	49.4	8.44%	20%	----
Physical Tests (QC Lot: 1830479)											
KS2500012-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	154	148	5	Diff <2x LOR	----
Physical Tests (QC Lot: 1830575)											
VA25A0174-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	123	125	1.29%	20%	----
Anions and Nutrients (QC Lot: 1830921)											
VA25A0169-001	WLNG EOP	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.206	0.206	0.142%	20%	----
Anions and Nutrients (QC Lot: 1830922)											
VA25A0169-001	WLNG EOP	Chloride	16887-00-6	E235.Cl	0.50	mg/L	7.86	7.92	0.672%	20%	----
Anions and Nutrients (QC Lot: 1830923)											
VA25A0169-001	WLNG EOP	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1830924)											
VA25A0169-001	WLNG EOP	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0199	0.0200	0.0002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1830925)											
VA25A0169-001	WLNG EOP	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1830926)											
VA25A0169-001	WLNG EOP	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	6.67	6.43	3.57%	20%	----
Anions and Nutrients (QC Lot: 1831071)											
VA25A0169-001	WLNG EOP	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.264	0.262	0.002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1831072)											
VA25A0169-001	WLNG EOP	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0029	0.0033	0.0004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1831073)											
VA25A0169-001	WLNG EOP	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0206	0.0202	0.0004	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1831069)											
FJ2500020-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	0.74	0.75	0.004	Diff <2x LOR	----
Total Sulfides (QC Lot: 1830800)											
TY2500054-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0257	0.0247	4.09%	20%	----
Total Metals (QC Lot: 1830723)											
VA25A0169-001	WLNG EOP	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0533	0.0507	4.84%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00084	0.00086	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
Total Metals (QC Lot: 1830723) - continued											
VA25A0169-001	WLNG EOP	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00089	0.00094	0.00005	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.00415	0.00415	0.00713%	20%	----
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.018	0.017	0.0008	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000100	mg/L	<0.0000100	<0.0000100	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	21.6	20.8	3.79%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000020	0.000022	0.000002	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	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00122	0.00125	0.00002	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000336	0.000310	0.000027	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0056	0.0054	0.0003	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.950	0.976	2.76%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00444	0.00441	0.485%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.0213	0.0218	2.26%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	2.02	2.03	0.649%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00301	0.00316	5.13%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	0.000055	0.000005	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	5.64	5.64	0.0575%	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	6.32	6.41	1.47%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0418	0.0443	5.89%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	2.27	2.18	0.08	Diff <2x LOR	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000011	0.000013	0.000002	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	0.00035	0.00037	0.00002	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	0.00185	0.00192	3.42%	20%	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00240	0.00240	0.289%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1830723) - continued											
VA25A0169-001	WLNG EOP	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	0.0186	0.0193	0.0007	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1831030)											
FJ2403912-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1830725)											
VA25A0169-001	WLNG EOP	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0263	0.0256	2.73%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00085	0.00086	0.000006	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00085	0.00086	0.00001	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00420	0.00393	6.79%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.017	0.017	0.00003	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000100	mg/L	<0.0000150	<0.0000100	0.0000050	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	21.1	21.0	0.320%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000021	0.000021	0.0000002	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00101	0.00094	0.00007	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	0.000229	0.000233	0.000004	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0054	0.0054	0.00001	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.01	0.983	2.86%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00446	0.00429	3.81%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.0216	0.0217	0.441%	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	2.14	2.03	4.88%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00318	0.00306	4.05%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000074	0.000091	0.000017	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	5.58	5.52	1.13%	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	6.63	6.42	3.18%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0422	0.0422	0.00944%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1830725) - continued											
VA25A0169-001	W LNG EOP	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	1.86	1.92	0.06	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.000012	0.000012	0.00000004	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	0.00178	0.00184	3.52%	20%	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00223	0.00225	0.911%	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	0.0187	0.0177	5.74%	20%	----
Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----		
Dissolved Metals (QC Lot: 1831042)											
FJ2403912-008	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1832247)											
FJ2403883-013	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1832577)											
HA2500015-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	0.0449	0.0457	1.68%	20%	----
Volatile Organic Compounds (QC Lot: 1832575)											
VA25A0167-001	Anonymous	Benzene	71-43-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611C	5.0	µg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 1832575) - continued											
VA25A0167-001	Anonymous	Dichloroethylene, trans-1,2-	156-60-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611C	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611C	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1832574)											
VA25A0167-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1833169)											
VA25A0169-001	WLNG EOP	Diethylene glycol	111-46-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Ethylene glycol	107-21-1	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Propylene glycol, 1,2-	57-55-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Triethylene glycol	112-27-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----



Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1830476)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1830479)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 1830575)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Anions and Nutrients (QCLot: 1830921)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1830922)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1830923)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1830924)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1830925)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1830926)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1831071)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1831072)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1831073)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 1831069)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1830800)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1830723)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1830723) - continued						
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1831030)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1830725)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1830725) - continued						
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1831042)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1832247)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1832577)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1832575)						
Benzene	71-43-2	E611C	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611C	0.5	µg/L	<0.50	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	<0.50	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611C	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611C	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611C	5	µg/L	<5.0	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611C	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	<0.50	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1832575) - continued						
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611C	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	<0.20	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611C	0.4	µg/L	<0.40	----
Trichloroethane, 1,1,1,-	71-55-6	E611C	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	<0.40	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 1831981)						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
Hydrocarbons (QCLot: 1832574)						
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----



Sub-Matrix: **Water**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980) - continued						
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A	0.05	µg/L	<0.050	----
Glycols (QCLot: 1833169)						
Diethylene glycol	111-46-6	E680E	5	mg/L	<5.0	----
Ethylene glycol	107-21-1	E680E	5	mg/L	<5.0	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	<5.0	----
Triethylene glycol	112-27-6	E680E	5	mg/L	<5.0	----



Laboratory Control Sample (LCS) Report

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

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1830476)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	96.7	85.0	115	----
Physical Tests (QCLot: 1830479)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	93.4	85.0	115	----
Physical Tests (QCLot: 1830575)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	102	85.0	115	----
Anions and Nutrients (QCLot: 1830921)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	93.8	90.0	110	----
Anions and Nutrients (QCLot: 1830922)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	94.9	90.0	110	----
Anions and Nutrients (QCLot: 1830923)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	98.9	85.0	115	----
Anions and Nutrients (QCLot: 1830924)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	95.0	90.0	110	----
Anions and Nutrients (QCLot: 1830925)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	94.1	90.0	110	----
Anions and Nutrients (QCLot: 1830926)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	95.4	90.0	110	----
Anions and Nutrients (QCLot: 1831071)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1831072)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	86.3	80.0	120	----
Anions and Nutrients (QCLot: 1831073)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	89.6	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1831069)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	102	80.0	120	----
Total Sulfides (QCLot: 1830800)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	103	80.0	120	----
Total Metals (QCLot: 1830723)									



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830723) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	101	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	109	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	99.9	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	104	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	108	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	102	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	104	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	103	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	101	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	102	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	93.2	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	105	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	103	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	103	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	101	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	99.6	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	99.7	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	102	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	106	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	91.5	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	108	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	98.6	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	94.0	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	104	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	102	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	103	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	109	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	98.4	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	106	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830723) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	99.0	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	97.5	80.0	120	----
Total Metals (QCLot: 1831030)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	99.9	80.0	120	----
Dissolved Metals (QCLot: 1830725)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	98.2	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	107	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	103	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	95.0	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	107	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	107	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	109	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	98.2	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	105	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	99.5	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	96.5	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	98.0	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	96.7	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	93.4	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	103	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	108	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	99.3	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	99.6	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	104	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	95.5	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	102	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	101	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	97.2	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	105	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	106	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	92.3	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	103	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	98.8	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	96.6	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1830725) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	107	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	99.5	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	96.3	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	103	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	97.7	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	104	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	102	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	97.8	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	94.0	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	100.0	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	94.8	80.0	120	----
Speciated Metals (QCLot: 1832247)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Aggregate Organics (QCLot: 1832577)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	105	85.0	115	----
Volatile Organic Compounds (QCLot: 1832575)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	99.8	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	91.1	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	122	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	93.1	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	95.3	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	95.9	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	97.2	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	100 µg/L	98.9	70.0	130	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	100 µg/L	109	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	114	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	108	70.0	130	----



Sub-Matrix: **Water**

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike		Recovery (%)		Recovery Limits (%)		Qualifier
					Target Concentration	LCS	Low	High			
Volatile Organic Compounds (QCLot: 1832575) - continued											
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	106	70.0	130	---		
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	105	70.0	130	---		
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	104	70.0	130	---		
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	99.0	70.0	130	---		
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	94.0	70.0	130	---		
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	102	70.0	130	---		
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	93.7	70.0	130	---		
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	99.5	70.0	130	---		
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	86.5	70.0	130	---		
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	99.5	70.0	130	---		
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	99.6	70.0	130	---		
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	108	70.0	130	---		
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	95.2	70.0	130	---		
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	105	70.0	130	---		
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	124	60.0	140	---		
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	103	60.0	140	---		
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	200 µg/L	99.2	70.0	130	---		
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	93.7	70.0	130	---		
Hydrocarbons (QCLot: 1831981)											
EPH (C10-C19)	---	E601A	250	µg/L	6490 µg/L	100	70.0	130	---		
EPH (C19-C32)	---	E601A	250	µg/L	3360 µg/L	103	70.0	130	---		
Hydrocarbons (QCLot: 1832574)											
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	6310 µg/L	76.8	70.0	130	---		
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980)											
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	95.5	60.0	130	---		
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	97.6	60.0	130	---		
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	114	60.0	130	---		
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	96.6	60.0	130	---		
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	91.6	60.0	130	---		
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	97.9	60.0	130	---		
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	103	60.0	130	---		
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	128	60.0	130	---		
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	107	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
Polycyclic Aromatic Hydrocarbons (QCLot: 1831980) - continued									
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	104	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	108	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	97.9	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	114	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	85.8	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	90.1	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	96.4	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	104	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	105	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	111	60.0	130	----
Glycols (QCLot: 1833169)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	107	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	106	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	104	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	106	70.0	130	----



Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1830921)										
VA25A0174-001	Anonymous	Fluoride	16984-48-8	E235.F	0.989 mg/L	1 mg/L	98.9	75.0	125	----
Anions and Nutrients (QCLot: 1830922)										
VA25A0174-001	Anonymous	Chloride	16887-00-6	E235.Cl	101 mg/L	100 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1830923)										
VA25A0174-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.521 mg/L	0.5 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1830924)										
VA25A0174-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	2.52 mg/L	2.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1830925)										
VA25A0174-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.500 mg/L	0.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1830926)										
VA25A0174-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1831071)										
VA25A0174-001	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1831072)										
VA25A0174-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0437 mg/L	0.05 mg/L	87.4	70.0	130	----
Anions and Nutrients (QCLot: 1831073)										
VA25A0174-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0947 mg/L	0.1 mg/L	94.7	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1831069)										
FJ2500020-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	5.04 mg/L	5 mg/L	101	70.0	130	----
Total Sulfides (QCLot: 1830800)										
TY2500054-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.222 mg/L	0.2 mg/L	111	75.0	125	----
Total Metals (QCLot: 1830723)										
VA25A0174-001	Anonymous	Aluminum, total	7429-90-5	E420	0.192 mg/L	0.2 mg/L	96.0	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0198 mg/L	0.02 mg/L	99.2	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0209 mg/L	0.02 mg/L	105	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0395 mg/L	0.04 mg/L	98.8	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00989 mg/L	0.01 mg/L	98.9	70.0	130	----
		Boron, total	7440-42-8	E420	0.100 mg/L	0.1 mg/L	100	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00393 mg/L	0.004 mg/L	98.3	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00982 mg/L	0.01 mg/L	98.2	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0395 mg/L	0.04 mg/L	98.6	70.0	130	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1830723) - continued										
VA25A0174-001	Anonymous	Cobalt, total	7440-48-4	E420	0.0186 mg/L	0.02 mg/L	92.8	70.0	130	----
		Copper, total	7440-50-8	E420	0.0189 mg/L	0.02 mg/L	94.3	70.0	130	----
		Iron, total	7439-89-6	E420	1.88 mg/L	2 mg/L	93.8	70.0	130	----
		Lead, total	7439-92-1	E420	0.0196 mg/L	0.02 mg/L	98.0	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0940 mg/L	0.1 mg/L	94.0	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	0.0201 mg/L	0.02 mg/L	101	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0374 mg/L	0.04 mg/L	93.6	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.92 mg/L	10 mg/L	99.2	70.0	130	----
		Potassium, total	7440-09-7	E420	3.85 mg/L	4 mg/L	96.3	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0408 mg/L	0.04 mg/L	102	70.0	130	----
		Silicon, total	7440-21-3	E420	9.20 mg/L	10 mg/L	92.0	70.0	130	----
		Silver, total	7440-22-4	E420	0.00373 mg/L	0.004 mg/L	93.2	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	ND mg/L	----	ND	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0423 mg/L	0.04 mg/L	106	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00378 mg/L	0.004 mg/L	94.4	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0129 mg/L	0.02 mg/L	64.6	70.0	130	MES
		Tin, total	7440-31-5	E420	0.0207 mg/L	0.02 mg/L	103	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0392 mg/L	0.04 mg/L	97.9	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00403 mg/L	0.004 mg/L	101	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0990 mg/L	0.1 mg/L	99.0	70.0	130	----
		Zinc, total	7440-66-6	E420	0.374 mg/L	0.4 mg/L	93.5	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0425 mg/L	0.04 mg/L	106	70.0	130	----
Total Metals (QCLot: 1831030)										
FJ2403912-005	Anonymous	Mercury, total	7439-97-6	E508	0.0000987 mg/L	0 mg/L	98.7	70.0	130	----
Dissolved Metals (QCLot: 1830725)										
VA25A0174-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.195 mg/L	0.2 mg/L	97.5	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0203 mg/L	0.02 mg/L	101	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0207 mg/L	0.02 mg/L	104	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0429 mg/L	0.04 mg/L	107	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00978 mg/L	0.01 mg/L	97.8	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.107 mg/L	0.1 mg/L	107	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00400 mg/L	0.004 mg/L	99.9	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	0.0388 mg/L	0.04 mg/L	97.1	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0189 mg/L	0.02 mg/L	94.4	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
Dissolved Metals (QCLot: 1830725) - continued										
VA25A0174-001	Anonymous	Copper, dissolved	7440-50-8	E421	0.0185 mg/L	0.02 mg/L	92.4	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.87 mg/L	2 mg/L	93.7	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0198 mg/L	0.02 mg/L	99.3	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.105 mg/L	0.1 mg/L	105	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	0.0205 mg/L	0.02 mg/L	102	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0367 mg/L	0.04 mg/L	91.7	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.6 mg/L	10 mg/L	106	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	3.89 mg/L	4 mg/L	97.2	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0194 mg/L	0.02 mg/L	97.0	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0429 mg/L	0.04 mg/L	107	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.97 mg/L	10 mg/L	99.7	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00378 mg/L	0.004 mg/L	94.4	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0435 mg/L	0.04 mg/L	109	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00381 mg/L	0.004 mg/L	95.3	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0142 mg/L	0.02 mg/L	71.1	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0396 mg/L	0.04 mg/L	99.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00387 mg/L	0.004 mg/L	96.6	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0978 mg/L	0.1 mg/L	97.8	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.365 mg/L	0.4 mg/L	91.3	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0418 mg/L	0.04 mg/L	104	70.0	130	----
Dissolved Metals (QCLot: 1831042)										
KS2405363-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000952 mg/L	0 mg/L	95.2	70.0	130	----
Speciated Metals (QCLot: 1832247)										
FJ2403883-014	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.264 mg/L	0.25 mg/L	106	70.0	130	----
Aggregate Organics (QCLot: 1832577)										
VA25A0143-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0216 mg/L	0.02 mg/L	108	75.0	125	----
Volatile Organic Compounds (QCLot: 1832575)										
VA25A0169-001	WLNQ EOP	Benzene	71-43-2	E611C	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Bromoform	75-25-2	E611C	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Chlorobenzene	108-90-7	E611C	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Chloroethane	75-00-3	E611C	106 µg/L	100 µg/L	106	50.0	150	----
		Chloroform	67-66-3	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Chloromethane	74-87-3	E611C	76.7 µg/L	100 µg/L	76.7	50.0	150	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1832575) - continued										
VA25A0169-001	WLNG EOP	Dibromochloromethane	124-48-1	E611C	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	96.6 µg/L	100 µg/L	96.6	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	98.3 µg/L	100 µg/L	98.3	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	108 µg/L	100 µg/L	108	60.0	140	----
		Dichloromethane	75-09-2	E611C	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	93.5 µg/L	100 µg/L	93.5	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	87.1 µg/L	100 µg/L	87.1	60.0	140	----
		Ethylbenzene	100-41-4	E611C	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	106 µg/L	100 µg/L	106	60.0	140	----
		Styrene	100-42-5	E611C	89.4 µg/L	100 µg/L	89.4	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	99.9 µg/L	100 µg/L	99.9	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	84.4 µg/L	100 µg/L	84.4	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		Toluene	108-88-3	E611C	93.8 µg/L	100 µg/L	93.8	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Trichloroethylene	79-01-6	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	106 µg/L	100 µg/L	106	50.0	150	----
		Vinyl chloride	75-01-4	E611C	94.4 µg/L	100 µg/L	94.4	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	190 µg/L	200 µg/L	95.2	60.0	140	----
		Xylene, o-	95-47-6	E611C	89.6 µg/L	100 µg/L	89.6	60.0	140	----
Hydrocarbons (QCLot: 1832574)										
VA25A0266-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	3950 µg/L	6310 µg/L	62.6	60.0	140	----

Qualifiers

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



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Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

Page of

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Report To Contact and company name below will appear on the final report Company: Triton Environmental Contact: Phone: Street: City/Province: Postal Code:		Reports / Recipients Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Merge QC/QCI Reports with COA <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		Turnaround Time (TAT) Requested <input checked="" type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum <input checked="" type="checkbox"/> 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum <input type="checkbox"/> Same day [E2] if received by 10am M-S - 200% rush surcharge.		Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests. Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm For all tests with rush TATs requested, please contact your AM to confirm availability.																																																																																																																																																																																																																																																																					
Invoice To Same as Report To <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Project Information ALS Account # / Quote #: VA23-TRIT100-012 Job #: 11964 PO / AFE: 11964 - Task 30 - Phase 3C-4C LSD:		Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																																																																																																																																																																																																																																							
ALS Lab Work Order # (ALS use only):		<table border="1"> <thead> <tr> <th rowspan="2">NUMBER OF CONTAINERS</th> <th colspan="11">Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below</th> <th rowspan="2">SAMPLES ON HOLD</th> <th rowspan="2">EXTENDED STORAGE REQUIRED</th> <th rowspan="2">SUSPECTED HAZARD (see notes)</th> </tr> <tr> <th>P</th><th>F/P</th><th></th><th></th><th></th><th></th><th>P</th><th>P</th><th>P</th><th>P</th><th>F/P</th><th></th><th>P</th> </tr> </thead> <tbody> <tr> <td>Total metals - mercury</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Dissolved metals - mercury</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Total hexavalent chromium</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Total trivalent chromium</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Total sulfide (low) (as H2S), Un-ionized Sulfide (low)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>VOC/MPH</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>EPH, PAH, LEPH/HEPH</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>DOC</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Glycols</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>General parameters (alkalinity)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Phenols</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>		NUMBER OF CONTAINERS	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below											SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)	P	F/P					P	P	P	P	F/P		P	Total metals - mercury																		Dissolved metals - mercury																		Total hexavalent chromium																		Total trivalent chromium																		TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)																		Total sulfide (low) (as H2S), Un-ionized Sulfide (low)																		Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)																		VOC/MPH																		EPH, PAH, LEPH/HEPH																		DOC																		Glycols																		General parameters (alkalinity)																		Phenols																		ALS Sample # (ALS use only):	
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Sample Identification and/or Coordinates (This description will appear on the report) WLNG EOP pH: 6.2 cond: 173 temp: 10.9 Turbidity: 0.8		Date (dd-mmm-yy) 05-Jan-25		Time (hh:mm) 09:53		Sample Type Water		NUMBER OF CONTAINERS 16		ROUTINE		SAMPLES ON HOLD		EXTENDED STORAGE REQUIRED		SUSPECTED HAZARD (see notes)																																																																																																																																																																																																																																																											
Drinking Water (DW) Samples¹ (client use) Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Are samples for human consumption/ use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Notes / Specify Limits for result evaluation by selecting from (Excel COC only) ESDAT EDD to: ESDat_CA+tritonenv@ESdatLabSync.net		Telephone: - 1 604 263 4188		SAMPLE RECEIPT DETAILS (ALS use only) <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input checked="" type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED Contaminants identified on Sample Receipt Notification: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Samples Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A		INITIAL SHIPMENT RECEPTION (ALS use only) Date: 5-Jan-25 Time: 14:14 Received by:		FINAL SHIPMENT RECEPTION (ALS use only) Date: 5-Jan Time: 2:05																																																																																																																																																																																																																																																																	

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix C	C-4

Woodfibre Site WTP Discharge Field Notes and Logs



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Table of Contents:

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

Appendices:

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

1. Executive Summary and Field Notes:

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 30th was 42,454 m³.

Daily Volume Summary:

Table 1: Discharge Volumes Daily Summary

Date	Location	Volume (m3)	Comments
December 30	Woodfibre (WF)	426	None
December 31	WF	416	None
January 1	WF	392	None
January 2	WF	393	None
January 3	WF	395	None
January 4	WF	417	None
January 5	WF	410	None
Total		2,849	None

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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)
12/30/2024	1:15:00	7.2	0.956	0	42,454	15	119
12/30/2024	1:30:00	7.4	0.987	0	42,469	10.3	119
12/30/2024	1:45:00	7.4	1.028	0	42,484	10.3	119
12/30/2024	2:00:00	7.4	0.994	0	42,498	10.3	119
12/30/2024	4:15:00	7.2	1.002	0	42,507	13.8	121
12/30/2024	4:30:00	7.4	0.964	0	42,521	10.6	119
12/30/2024	4:45:00	7.4	0.987	0	42,536	10.5	119
12/30/2024	5:00:00	7.4	0.994	0	42,551	10.5	119
12/30/2024	6:45:00	7.1	0.000	0	42,555	16.4	243
12/30/2024	7:30:00	7.3	0.941	0	42,556	16.3	121
12/30/2024	7:45:00	7.3	0.461	0	42,568	10.9	119
12/30/2024	8:00:00	7.4	0.930	0	42,578	10.5	119
12/30/2024	8:15:00	7.4	0.945	0	42,593	10.4	119
12/30/2024	8:30:00	7.4	0.953	0	42,607	10.4	119
12/30/2024	10:15:00	7.3	0.903	0	42,621	9.8	111
12/30/2024	10:30:00	7.4	0.926	0	42,634	9.6	112
12/30/2024	10:45:00	7.4	0.499	0	42,646	10.2	112
12/30/2024	11:00:00	7.4	0.930	0	42,657	9.8	115
12/30/2024	11:15:00	7.4	0.907	0	42,670	9.7	114
12/30/2024	13:15:00	7.3	0.922	0	42,680	9.7	114
12/30/2024	13:30:00	7.4	0.941	0	42,694	9.7	113

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/30/2024	13:45:00	7.4	0.922	0	42,708	9.7	113
12/30/2024	14:00:00	7.4	0.926	0	42,722	9.9	116
12/30/2024	14:45:00	7.3	0.922	0	42,729	10.6	117
12/30/2024	15:00:00	7.4	0.881	0	42,739	10.1	114
12/30/2024	16:15:00	7.2	0.907	0	42,751	11.6	111
12/30/2024	16:30:00	7.3	0.930	0	42,764	9.9	112
12/30/2024	17:45:00	7.2	0.919	0	42,780	10	109
12/30/2024	18:00:00	7.3	0.881	0	42,793	10	113
12/30/2024	19:15:00	7.3	0.915	0	42,811	10.1	112
12/30/2024	19:30:00	7.3	0.877	0	42,825	10.1	111
12/30/2024	19:45:00	7.3	0.000	0	42,827	10.3	110
12/30/2024	20:00:00	7.2	0.000	0	42,827	10.4	110
12/30/2024	20:15:00	7.2	0.000	0	42,827	10.6	110
12/30/2024	20:30:00	7.2	0.000	0	42,827	10.7	111
12/30/2024	20:45:00	7.3	0.438	0	42,832	10.4	114
12/30/2024	21:00:00	7.3	0.881	0	42,842	10.1	113
12/30/2024	22:15:00	7.3	0.873	0	42,857	10.5	118
12/30/2024	22:30:00	7.4	0.873	0	42,870	10.5	118
12/30/2024	23:45:00	7.3	0.892	0	42,880	10.6	119
12/31/2024	0:00:00	7.3	0.911	0	42,893	10.7	119
12/31/2024	1:15:00	7.2	0.896	0	42,902	11	121
12/31/2024	1:30:00	7.3	0.866	0	42,915	10.8	119
12/31/2024	2:45:00	7.2	0.877	0	42,925	15.3	119
12/31/2024	3:00:00	7.3	0.866	0	42,938	10.8	119
12/31/2024	4:30:00	7.3	0.881	0	42,960	10.8	119

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/31/2024	4:45:00	7.4	0.862	0	42,973	10.7	119
12/31/2024	6:15:00	7.3	0.847	0	42,980	11	120
12/31/2024	6:30:00	7.4	0.877	0	42,993	10.7	119
12/31/2024	7:45:00	7.2	0.896	0	43,003	13.7	120
12/31/2024	8:00:00	7.3	0.869	0	43,016	10.7	119
12/31/2024	9:00:00	7.3	0.885	0	43,030	11.3	119
12/31/2024	9:15:00	7.4	0.873	0	43,043	10.5	118
12/31/2024	9:30:00	7.4	0.873	0	43,057	10.3	116
12/31/2024	11:00:00	7.3	0.851	0	43,077	10.1	115
12/31/2024	11:15:00	7.4	0.824	0	43,090	10.2	115
12/31/2024	12:45:00	7.2	0.896	0	43,099	10.7	115
12/31/2024	13:00:00	7.3	0.922	0	43,112	10.2	113
12/31/2024	13:15:00	7.4	0.851	0	43,125	10.1	113
12/31/2024	14:30:00	7.3	0.427	0	43,133	10.5	114
12/31/2024	14:45:00	7.3	0.881	0	43,141	10.4	114
12/31/2024	16:00:00	7.3	0.896	0	43,154	10.6	114
12/31/2024	16:15:00	7.3	0.869	0	43,167	10.6	114
12/31/2024	16:30:00	7.3	0.885	0	43,180	10.5	113
12/31/2024	17:45:00	7.3	0.442	0	43,193	10.4	111
12/31/2024	18:00:00	7.3	0.866	0	43,203	10.1	109
12/31/2024	18:15:00	7.3	0.839	0	43,215	10.1	108
12/31/2024	19:30:00	7.3	0.000	0	43,233	10.1	110
12/31/2024	19:45:00	7.2	0.000	0	43,233	10.6	113
12/31/2024	20:00:00	7.3	0.847	0	43,240	10.4	115
12/31/2024	20:15:00	7.3	0.832	0	43,253	10.8	117

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/31/2024	20:30:00	7.3	0.000	0	43,261	11.2	117
12/31/2024	21:30:00	7.2	0.378	0	43,265	10.9	113
12/31/2024	21:45:00	7.3	0.881	0	43,274	10.7	113
12/31/2024	23:00:00	7.1	0.816	0	43,286	10.9	110
12/31/2024	23:15:00	7.2	0.858	0	43,299	10.4	111
12/31/2024	23:30:00	7.3	0.386	0	43,309	10.6	112
1/1/2025	1:00:00	7.2	0.851	0	43,322	10.4	113
1/1/2025	1:15:00	7.2	0.000	0	43,325	10.6	113
1/1/2025	1:45:00	7.3	0.835	0	43,332	10.2	112
1/1/2025	2:00:00	7.3	0.816	0	43,345	10.1	114
1/1/2025	2:15:00	7.3	0.828	0	43,357	10.2	114
1/1/2025	3:45:00	7.3	0.367	0	43,370	10.4	113
1/1/2025	4:00:00	7.2	0.756	0	43,375	11.3	116
1/1/2025	5:00:00	7.2	0.816	0	43,390	10.1	113
1/1/2025	5:15:00	7.3	0.000	0	43,400	10	114
1/1/2025	6:00:00	7.2	0.824	0	43,409	9.7	113
1/1/2025	6:15:00	7.3	0.839	0	43,421	9.7	111
1/1/2025	7:15:00	7.2	0.828	0	43,427	10	116
1/1/2025	7:30:00	7.2	0.832	0	43,439	10.2	117
1/1/2025	8:45:00	7.2	0.809	0	43,451	10.5	114
1/1/2025	9:00:00	7.3	0.805	0	43,464	10	113
1/1/2025	9:15:00	7.3	0.790	0	43,476	10.1	117
1/1/2025	10:00:00	7.2	0.790	0	43,482	9.8	112
1/1/2025	10:15:00	7.3	0.820	0	43,494	9.7	112
1/1/2025	11:30:00	7.2	0.794	0	43,512	10.1	116

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/1/2025	12:00:00	7.2	0.748	0	43,523	11	116
1/1/2025	13:30:00	7.2	0.775	0	43,541	10.4	118
1/1/2025	14:45:00	7.2	0.790	0	43,557	10.7	119
1/1/2025	15:00:00	7.3	0.809	0	43,569	10.5	118
1/1/2025	16:00:00	7.2	0.816	0	43,581	10.5	118
1/1/2025	16:15:00	7.3	0.798	0	43,594	10.4	117
1/1/2025	17:15:00	7.1	0.794	0	43,604	13.1	118
1/1/2025	18:00:00	7.3	0.760	0	43,614	10.3	115
1/1/2025	18:15:00	7.3	0.741	0	43,625	10.3	117
1/1/2025	18:30:00	7.3	0.718	0	43,636	10.5	117
1/1/2025	19:15:00	7.1	0.000	0	43,637	12.8	118
1/1/2025	19:30:00	7.1	0.000	0	43,637	13.4	253
1/1/2025	19:45:00	7.1	0.321	0	43,640	16	255
1/1/2025	20:00:00	7.2	0.741	0	43,650	10.6	118
1/1/2025	20:15:00	7.2	0.000	0	43,656	10.8	118
1/1/2025	20:30:00	7.2	0.000	0	43,656	11.6	119
1/1/2025	20:45:00	7.1	0.000	0	43,656	12.6	118
1/1/2025	21:00:00	7.1	0.000	0	43,656	13.6	255
1/1/2025	21:15:00	7.2	0.000	0	43,662	11.1	119
1/1/2025	21:45:00	7.2	0.771	0	43,665	12	119
1/1/2025	22:00:00	7.3	0.767	0	43,677	11	119
1/1/2025	22:15:00	7.3	0.775	0	43,689	11	119
1/1/2025	23:15:00	7.2	0.786	0	43,702	11.2	122
1/1/2025	23:30:00	7.3	0.820	0	43,714	11.2	121
1/2/2025	0:45:00	7.2	0.809	0	43,721	11.3	121

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/2/2025	1:00:00	7.3	0.805	0	43,733	10.9	119
1/2/2025	1:15:00	7.3	0.782	0	43,745	10.7	119
1/2/2025	2:45:00	7.2	0.771	0	43,757	11.2	121
1/2/2025	3:00:00	7.3	0.794	0	43,769	10.8	121
1/2/2025	4:00:00	7.2	0.790	0	43,782	10.9	122
1/2/2025	4:15:00	7.3	0.782	0	43,794	10.8	122
1/2/2025	4:30:00	7.3	0.764	0	43,805	10.8	122
1/2/2025	5:00:00	7.2	0.000	0	43,812	13	122
1/2/2025	6:00:00	7.2	0.809	0	43,822	11	122
1/2/2025	6:15:00	7.3	0.748	0	43,834	11.1	122
1/2/2025	7:15:00	7.1	0.000	0	43,839	16.8	256
1/2/2025	7:30:00	7.3	0.779	0	43,848	11.1	122
1/2/2025	7:45:00	7.3	0.760	0	43,859	11.1	121
1/2/2025	8:00:00	7.2	0.000	0	43,864	11.6	121
1/2/2025	8:15:00	7.2	0.000	0	43,864	12.8	121
1/2/2025	9:00:00	7.1	0.507	0	43,867	11.7	117
1/2/2025	9:15:00	7.2	0.813	0	43,875	10.7	117
1/2/2025	9:30:00	7.3	0.767	0	43,887	10.7	117
1/2/2025	10:30:00	7.2	0.748	0	43,894	10.7	115
1/2/2025	10:45:00	7.3	0.937	0	43,904	10.4	114
1/2/2025	12:00:00	7.3	0.930	0	43,928	10.5	117
1/2/2025	12:15:00	7.3	0.915	0	43,940	10.5	118
1/2/2025	13:15:00	7.1	0.896	0	43,946	12.3	118
1/2/2025	13:30:00	7.3	0.915	0	43,960	10.4	119
1/2/2025	14:45:00	7.1	0.828	0	43,972	11.7	116

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/2/2025	15:00:00	7.2	0.397	0	43,979	11.5	114
1/2/2025	15:15:00	7.2	0.824	0	43,992	10	115
1/2/2025	16:15:00	7.2	0.329	0	43,998	12	118
1/2/2025	16:30:00	7.2	0.756	0	44,005	10.3	119
1/2/2025	16:45:00	7.2	0.726	0	44,017	10.5	116
1/2/2025	17:30:00	7.2	0.741	0	44,019	11.2	119
1/2/2025	17:45:00	7.3	0.809	0	44,028	10.4	118
1/2/2025	18:15:00	7.2	0.813	0	44,037	9.9	114
1/2/2025	18:30:00	7.2	0.805	0	44,049	10.1	117
1/2/2025	19:15:00	7.1	0.000	0	44,060	12.1	261
1/2/2025	19:30:00	7.1	0.000	0	44,060	13	261
1/2/2025	19:45:00	7.1	0.000	0	44,060	13.9	259
1/2/2025	20:00:00	7.2	0.782	0	44,066	10.4	119
1/2/2025	20:15:00	7.2	0.782	0	44,078	10.8	119
1/2/2025	20:30:00	7.2	0.000	0	44,086	10.9	119
1/2/2025	20:45:00	7.1	0.000	0	44,086	11.8	119
1/2/2025	22:00:00	7.3	0.779	0	44,090	10.3	116
1/2/2025	22:15:00	7.3	0.786	0	44,102	10.4	113
1/2/2025	22:30:00	7.3	0.779	0	44,114	10.3	112
1/3/2025	0:00:00	7.3	0.824	0	44,125	9.9	111
1/3/2025	0:15:00	7.3	0.820	0	44,138	10	113
1/3/2025	1:30:00	7.2	0.779	0	44,142	10.4	114
1/3/2025	1:45:00	7.3	0.790	0	44,153	10.1	116
1/3/2025	3:15:00	7.3	0.756	0	44,174	10.2	116
1/3/2025	3:30:00	7.3	0.775	0	44,186	10.6	117

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/3/2025	4:45:00	7.2	0.756	0	44,192	10.7	110
1/3/2025	5:00:00	7.3	0.748	0	44,203	9.7	110
1/3/2025	5:15:00	7.3	0.730	0	44,214	9.8	110
1/3/2025	7:00:00	7.3	0.741	0	44,225	9.8	113
1/3/2025	7:15:00	7.3	0.760	0	44,237	9.7	111
1/3/2025	7:30:00	7.3	0.745	0	44,248	9.7	113
1/3/2025	9:15:00	7.3	0.733	0	44,261	9.5	113
1/3/2025	9:30:00	7.3	0.718	0	44,272	9.5	112
1/3/2025	9:45:00	7.3	0.726	0	44,283	9.7	113
1/3/2025	10:00:00	7.3	0.703	0	44,294	9.6	113
1/3/2025	11:00:00	7.3	0.745	0	44,301	9.5	113
1/3/2025	11:15:00	7.3	0.699	0	44,312	9.6	115
1/3/2025	11:30:00	7.3	0.696	0	44,322	9.5	115
1/3/2025	12:15:00	7.2	0.688	0	44,325	11.7	261
1/3/2025	13:15:00	7.3	0.760	0	44,340	9.7	114
1/3/2025	13:30:00	7.3	0.771	0	44,351	10	114
1/3/2025	13:45:00	7.3	0.752	0	44,363	10.1	116
1/3/2025	14:00:00	7.3	0.000	0	44,370	10.3	116
1/3/2025	15:00:00	7.3	0.730	0	44,379	10.3	118
1/3/2025	15:15:00	7.3	0.722	0	44,389	10.7	117
1/3/2025	16:15:00	7.3	0.851	0	44,394	10.6	117
1/3/2025	16:30:00	7.3	0.824	0	44,407	10.7	118
1/3/2025	16:45:00	7.3	0.801	0	44,419	10.8	116
1/3/2025	17:45:00	7.3	0.782	0	44,435	10.7	118
1/3/2025	18:00:00	7.3	0.760	7.4	44,446	10.8	118

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/3/2025	19:15:00	7.3	0.688	6.7	44,462	11	117
1/3/2025	19:30:00	7.3	0.000	4.9	44,467	11.3	118
1/3/2025	19:45:00	7.2	0.000	4.8	44,467	12.1	118
1/3/2025	20:00:00	7.1	0.000	4.4	44,467	12.9	256
1/3/2025	20:15:00	7.1	0.000	4.4	44,467	13.7	256
1/3/2025	20:45:00	7.3	0.658	0	44,476	10.8	114
1/3/2025	21:00:00	7.3	0.684	0	44,486	10.8	114
1/3/2025	22:45:00	7.3	0.805	0	44,505	10.2	111
1/3/2025	23:00:00	7.3	0.775	0	44,517	10.2	111
1/3/2025	23:45:00	7.2	0.000	0	44,520	10.3	111
1/4/2025	0:00:00	7.1	0.000	0	44,520	10.7	115
1/4/2025	0:30:00	7.3	0.832	0	44,527	10.1	113
1/4/2025	0:45:00	7.3	0.782	0	44,539	10.1	113
1/4/2025	2:00:00	7.3	0.756	0	44,560	10.1	113
1/4/2025	3:30:00	7.3	0.782	0	44,575	9.8	112
1/4/2025	3:45:00	7.3	0.779	0	44,586	10	111
1/4/2025	4:00:00	7.3	0.714	0	44,597	10	112
1/4/2025	5:00:00	7.2	0.703	0	44,608	10.4	116
1/4/2025	5:15:00	7.3	0.707	0	44,618	10.4	117
1/4/2025	5:30:00	7.3	0.662	0	44,628	10.4	116
1/4/2025	6:45:00	7.2	0.779	0	44,638	11.2	113
1/4/2025	7:00:00	7.3	0.801	0	44,650	10	270
1/4/2025	7:15:00	7.3	0.809	0	44,662	10.1	272
1/4/2025	8:30:00	7.1	0.745	0	44,669	13	268
1/4/2025	8:45:00	7.2	0.748	0	44,681	10.3	274

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/4/2025	9:00:00	7.2	0.714	0	44,692	10.3	279
1/4/2025	9:15:00	7.2	0.696	0	44,702	10.2	275
1/4/2025	10:15:00	7.2	0.722	0	44,711	10.2	272
1/4/2025	10:30:00	7.2	0.673	0	44,721	10.1	269
1/4/2025	11:45:00	7.2	0.646	0	44,733	9.9	270
1/4/2025	12:00:00	7.3	0.597	0	44,742	9.5	269
1/4/2025	12:15:00	7.3	0.586	0	44,751	9.2	111
1/4/2025	14:30:00	7.2	0.677	0	44,763	9.1	111
1/4/2025	14:45:00	7.2	0.665	0	44,773	9.3	112
1/4/2025	15:00:00	7.3	0.620	0	44,782	9.3	116
1/4/2025	15:15:00	7.3	0.616	0	44,792	9.5	116
1/4/2025	16:00:00	7.2	0.601	0	44,795	9.9	116
1/4/2025	16:15:00	7.2	0.665	0	44,805	10.2	116
1/4/2025	16:30:00	7.1	0.703	0	44,815	10.9	117
1/4/2025	18:00:00	7.2	0.798	0	44,829	10.7	115
1/4/2025	18:15:00	7.1	0.764	0	44,841	11.1	116
1/4/2025	18:30:00	7.1	0.775	0	44,853	11.8	258
1/4/2025	20:00:00	7.1	0.752	0	44,872	11.4	116
1/4/2025	21:00:00	7.1	0.722	0.2	44,883	15.1	255
1/4/2025	21:15:00	7.1	0.718	1	44,894	12.5	118
1/4/2025	21:30:00	7.1	0.000	0.8	44,898	13.7	256
1/4/2025	22:45:00	7.2	0.824	0	44,901	11.1	114
1/4/2025	23:00:00	7.2	0.809	0	44,913	11.5	114
1/4/2025	23:15:00	7.1	0.820	0	44,925	12.1	116
1/4/2025	23:30:00	7.1	0.801	0	44,937	12.8	116

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/5/2025	0:45:00	7.1	0.794	0	44,946	12.6	119
1/5/2025	1:00:00	7.1	0.771	0	44,957	12.8	119
1/5/2025	2:15:00	7.1	0.760	0	44,971	12.1	119
1/5/2025	3:45:00	7.2	0.790	0	44,988	11.3	118
1/5/2025	4:00:00	7.1	0.782	0	44,999	12	119
1/5/2025	4:15:00	7.1	0.764	0	45,011	12.6	119
1/5/2025	5:15:00	7.2	0.756	0	45,019	11.9	119
1/5/2025	5:30:00	7.1	0.760	0	45,030	12.5	119
1/5/2025	5:45:00	7.1	0.726	0	45,042	13.4	258
1/5/2025	6:45:00	7	0.000	0	45,046	15.7	256
1/5/2025	7:15:00	7.2	0.760	0	45,055	11.5	119
1/5/2025	7:30:00	7.1	0.718	0	45,067	12.4	264
1/5/2025	8:45:00	7.1	0.722	0	45,078	10.9	262
1/5/2025	9:00:00	7.1	0.733	0	45,089	11.2	264
1/5/2025	9:15:00	7.1	0.703	0	45,099	12.6	266
1/5/2025	10:30:00	7.1	0.680	0	45,117	11.7	118
1/5/2025	10:45:00	7.1	0.692	0	45,128	12.3	261
1/5/2025	12:00:00	7.1	0.658	0	45,139	11.2	117
1/5/2025	12:15:00	7.1	0.680	0	45,150	11.9	259
1/5/2025	12:30:00	7.1	0.639	0	45,159	12.7	259
1/5/2025	13:45:00	7.2	0.722	0	45,162	10.6	116
1/5/2025	14:00:00	7.2	0.722	0	45,173	10.8	116
1/5/2025	14:15:00	7.2	0.714	0	45,184	11	117
1/5/2025	15:30:00	7.2	0.658	0	45,195	11.3	113
1/5/2025	15:45:00	7.2	0.696	0	45,206	10.9	113

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/5/2025	16:00:00	7.2	0.677	0	45,216	11	114
1/5/2025	17:00:00	7.1	0.665	0	45,219	11.7	113
1/5/2025	17:15:00	7.2	0.662	0	45,229	11	115
1/5/2025	17:30:00	7.2	0.646	0	45,239	11.1	116
1/5/2025	18:30:00	7.2	0.737	0	45,247	11	113
1/5/2025	19:15:00	7.2	0.718	0	45,257	11.4	115
1/5/2025	19:30:00	7.3	0.000	0.8	45,263	11.5	114
1/5/2025	19:45:00	7.2	0.677	0	45,266	11.5	116
1/5/2025	20:00:00	7.2	0.688	0	45,276	11.9	116
1/5/2025	20:15:00	7.1	0.684	0	45,287	12.2	115
1/5/2025	20:30:00	7.1	0.000	0	45,292	12.6	117
1/5/2025	20:45:00	7.1	0.000	2.7	45,292	16	256
1/5/2025	21:00:00	7.1	0.624	0	45,293	17.4	254
1/5/2025	21:15:00	7.1	0.646	0	45,302	17.8	253
1/5/2025	21:30:00	7.1	0.559	0	45,312	18	255
1/5/2025	21:45:00	7.1	0.665	0	45,322	18.2	253
1/5/2025	22:00:00	7.1	0.000	0	45,328	18.4	253
1/5/2025	22:15:00	7	0.000	0	45,330	20	250
1/5/2025	22:30:00	7	0.000	0	45,330	19.9	251
1/5/2025	22:45:00	7	0.000	0	45,330	19.3	252
1/5/2025	23:15:00	7.2	0.926	0	45,342	11.6	114
1/5/2025	23:30:00	7.2	0.858	0	45,356	11.2	117



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Table 3. In-Situ Parameters

Date	Time	Temperature °C	DO mg/L	Conductivity SPC-uS/cm	SAL-ppt	pH	ORP (mV)	NTU
12/30/2024	06:06:36PM	9.6	11.41	129.2	0.06	7.97	125.7	1.04
12/31/2024	09:21:18AM	10.2	11.57	125.4	0.06	8.16	131.3	0.36
01/01/2025	08:52:30AM	10.1	11.45	124.9	0.06	7.88	132.1	0.98
01/02/2025	02:35:01PM	9.5	11.79	135.8	0.06	7.95	146.2	0.01
01/03/2025	04:40:10PM	10.0	11.86	124.3	0.06	7.86	128.1	0.13
01/04/2025	11:45:21AM	9.9	11.18	135.6	0.08	7.89	129.8	1.76
01/05/2025	05:40:56PM	12.6	11.19	309.6	0.15	7.77	131.0	0.34

3. Calibration Log:

Table 4. Calibration Log

Date	Unit	pH	Conductivity/Temp.	Salinity	NTU
12/23/2024	YSI	✓	✓	✓	✓
12/23/2024	WTP	✓	N/A	N/A	✓

		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: SD Approved by: BC2 Date: January 14, 2025	

APPENDIX A: WTP Log

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/30/2024	0:00:00	7.2	0.000	0	42,454	Closed	12.4	114
12/30/2024	0:15:00	7.2	0.000	0	42,454	Closed	12.7	115
12/30/2024	0:30:00	7.2	0.000	0	42,454	Closed	13	113
12/30/2024	0:45:00	7.2	0.000	0	42,454	Closed	13.3	116
12/30/2024	1:00:00	7.2	0.000	0	42,454	Closed	13.8	118
12/30/2024	1:15:00	7.2	0.956	0	42,454	Open	15	119
12/30/2024	1:30:00	7.4	0.987	0	42,469	Open	10.3	119
12/30/2024	1:45:00	7.4	1.028	0	42,484	Open	10.3	119
12/30/2024	2:00:00	7.4	0.994	0	42,498	Open	10.3	119
12/30/2024	2:15:00	7.4	0.000	0	42,505	Closed	10.7	119
12/30/2024	2:30:00	7.3	0.000	0	42,505	Closed	11.7	119
12/30/2024	2:45:00	7.3	0.000	0	42,505	Closed	12.7	119
12/30/2024	3:00:00	7.2	0.000	0	42,505	Closed	13.6	119
12/30/2024	3:15:00	7.2	0.000	0	42,505	Closed	14.5	119
12/30/2024	3:30:00	7.2	0.000	0	42,505	Closed	15.3	120
12/30/2024	3:45:00	7.2	0.000	0	42,505	Closed	16	120
12/30/2024	4:00:00	7.1	0.000	0	42,505	Closed	16.6	243
12/30/2024	4:15:00	7.2	1.002	0	42,507	Open	13.8	121
12/30/2024	4:30:00	7.4	0.964	0	42,521	Open	10.6	119
12/30/2024	4:45:00	7.4	0.987	0	42,536	Open	10.5	119
12/30/2024	5:00:00	7.4	0.994	0	42,551	Open	10.5	119
12/30/2024	5:15:00	7.4	0.000	0	42,555	Closed	11.1	119
12/30/2024	5:30:00	7.3	0.000	0	42,555	Closed	12.2	119
12/30/2024	5:45:00	7.2	0.000	0	42,555	Closed	13.2	119



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/30/2024	6:00:00	7.2	0.000	0	42,555	Closed	14.2	121
12/30/2024	6:15:00	7.2	0.000	0	42,555	Closed	15	121
12/30/2024	6:30:00	7.2	0.000	0	42,555	Closed	15.8	121
12/30/2024	6:45:00	7.1	0.000	0	42,555	Open	16.4	243
12/30/2024	7:00:00	7.1	0.000	0	42,555	Closed	16.9	246
12/30/2024	7:15:00	7.1	0.000	0	42,555	Closed	17.2	245
12/30/2024	7:30:00	7.3	0.941	0	42,556	Open	16.3	121
12/30/2024	7:45:00	7.3	0.461	0	42,568	Open	10.9	119
12/30/2024	8:00:00	7.4	0.930	0	42,578	Open	10.5	119
12/30/2024	8:15:00	7.4	0.945	0	42,593	Open	10.4	119
12/30/2024	8:30:00	7.4	0.953	0	42,607	Open	10.4	119
12/30/2024	8:45:00	7.4	0.000	0	42,616	Closed	10.7	118
12/30/2024	9:00:00	7.3	0.000	0	42,616	Closed	11.1	114
12/30/2024	9:15:00	7.3	0.000	0	42,616	Closed	11.4	113
12/30/2024	9:30:00	7.2	0.000	0	42,616	Closed	11.7	114
12/30/2024	9:45:00	7.2	0.000	0	42,616	Closed	12.1	114
12/30/2024	10:00:00	7.2	0.000	0	42,616	Closed	12.3	113
12/30/2024	10:15:00	7.3	0.903	0	42,621	Open	9.8	111
12/30/2024	10:30:00	7.4	0.926	0	42,634	Open	9.6	112
12/30/2024	10:45:00	7.4	0.499	0	42,646	Open	10.2	112
12/30/2024	11:00:00	7.4	0.930	0	42,657	Open	9.8	115
12/30/2024	11:15:00	7.4	0.907	0	42,670	Open	9.7	114
12/30/2024	11:30:00	7.4	0.000	0	42,673	Closed	10	112
12/30/2024	11:45:00	7.3	0.000	0	42,673	Closed	10.3	111
12/30/2024	12:00:00	7.2	0.000	0	42,673	Closed	10.7	113



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/30/2024	12:15:00	7.2	0.000	0	42,673	Closed	11.2	114
12/30/2024	12:30:00	7.2	0.000	0	42,673	Closed	12	117
12/30/2024	12:45:00	7.2	0.000	0	42,673	Closed	12.5	116
12/30/2024	13:00:00	7.2	0.000	0	42,673	Closed	12.9	115
12/30/2024	13:15:00	7.3	0.922	0	42,680	Open	9.7	114
12/30/2024	13:30:00	7.4	0.941	0	42,694	Open	9.7	113
12/30/2024	13:45:00	7.4	0.922	0	42,708	Open	9.7	113
12/30/2024	14:00:00	7.4	0.926	0	42,722	Open	9.9	116
12/30/2024	14:15:00	7.4	0.000	0	42,726	Closed	10.5	117
12/30/2024	14:30:00	7.3	0.000	0	42,726	Closed	11.4	117
12/30/2024	14:45:00	7.3	0.922	0	42,729	Open	10.6	117
12/30/2024	15:00:00	7.4	0.881	0	42,739	Open	10.1	114
12/30/2024	15:15:00	7.4	0.000	0	42,750	Closed	10.1	114
12/30/2024	15:30:00	7.3	0.000	0	42,750	Closed	10.6	114
12/30/2024	15:45:00	7.3	0.000	0	42,750	Closed	11	114
12/30/2024	16:00:00	7.2	0.000	0	42,750	Closed	11.4	113
12/30/2024	16:15:00	7.2	0.907	0	42,751	Open	11.6	111
12/30/2024	16:30:00	7.3	0.930	0	42,764	Open	9.9	112
12/30/2024	16:45:00	7.4	0.000	0	42,778	Closed	10	110
12/30/2024	17:00:00	7.3	0.000	0	42,778	Closed	10.3	111
12/30/2024	17:15:00	7.2	0.000	0	42,778	Closed	10.5	109
12/30/2024	17:30:00	7.2	0.000	0	42,778	Closed	10.7	109
12/30/2024	17:45:00	7.2	0.919	0	42,780	Open	10	109
12/30/2024	18:00:00	7.3	0.881	0	42,793	Open	10	113
12/30/2024	18:15:00	7.3	0.000	0	42,801	Closed	10.2	113



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/30/2024	18:30:00	7.3	0.000	0	42,801	Closed	10.7	113
12/30/2024	18:45:00	7.2	0.000	0	42,801	Closed	11	113
12/30/2024	19:00:00	7.2	0.000	0	42,801	Closed	11.2	111
12/30/2024	19:15:00	7.3	0.915	0	42,811	Open	10.1	112
12/30/2024	19:30:00	7.3	0.877	0	42,825	Open	10.1	111
12/30/2024	19:45:00	7.3	0.000	0	42,827	Open	10.3	110
12/30/2024	20:00:00	7.2	0.000	0	42,827	Open	10.4	110
12/30/2024	20:15:00	7.2	0.000	0	42,827	Open	10.6	110
12/30/2024	20:30:00	7.2	0.000	0	42,827	Open	10.7	111
12/30/2024	20:45:00	7.3	0.438	0	42,832	Open	10.4	114
12/30/2024	21:00:00	7.3	0.881	0	42,842	Open	10.1	113
12/30/2024	21:15:00	7.3	0.000	0	42,844	Closed	10.5	114
12/30/2024	21:30:00	7.2	0.000	0	42,844	Closed	11.3	116
12/30/2024	21:45:00	7.2	0.000	0	42,844	Closed	12.1	117
12/30/2024	22:00:00	7.2	0.779	0	42,844	Closed	13.1	118
12/30/2024	22:15:00	7.3	0.873	0	42,857	Open	10.5	118
12/30/2024	22:30:00	7.4	0.873	0	42,870	Open	10.5	118
12/30/2024	22:45:00	7.3	0.000	0	42,872	Closed	11.2	119
12/30/2024	23:00:00	7.2	0.000	0	42,872	Closed	12.2	119
12/30/2024	23:15:00	7.2	0.000	0	42,872	Closed	13.3	119
12/30/2024	23:30:00	7.2	0.000	0	42,872	Closed	14.1	251
12/30/2024	23:45:00	7.3	0.892	0	42,880	Open	10.6	119
12/31/2024	0:00:00	7.3	0.911	0	42,893	Open	10.7	119
12/31/2024	0:15:00	7.3	0.000	0	42,898	Closed	11.1	119
12/31/2024	0:30:00	7.2	0.000	0	42,898	Closed	12.1	119



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/31/2024	0:45:00	7.2	0.000	0	42,898	Closed	13.2	119
12/31/2024	1:00:00	7.2	0.000	0	42,898	Closed	14.1	119
12/31/2024	1:15:00	7.2	0.896	0	42,902	Open	11	121
12/31/2024	1:30:00	7.3	0.866	0	42,915	Open	10.8	119
12/31/2024	1:45:00	7.4	0.000	0	42,924	Closed	11	119
12/31/2024	2:00:00	7.3	0.000	0	42,924	Closed	12	119
12/31/2024	2:15:00	7.2	0.000	0	42,924	Closed	13.1	119
12/31/2024	2:30:00	7.2	0.000	0	42,924	Closed	14.1	119
12/31/2024	2:45:00	7.2	0.877	0	42,925	Open	15.3	119
12/31/2024	3:00:00	7.3	0.866	0	42,938	Open	10.8	119
12/31/2024	3:15:00	7.4	0.000	0	42,950	Closed	10.8	119
12/31/2024	3:30:00	7.3	0.000	0	42,950	Closed	11.6	119
12/31/2024	3:45:00	7.2	0.000	0	42,950	Closed	12.8	119
12/31/2024	4:00:00	7.2	0.000	0	42,950	Closed	13.8	120
12/31/2024	4:15:00	7.2	0.000	0	42,950	Closed	14.7	119
12/31/2024	4:30:00	7.3	0.881	0	42,960	Open	10.8	119
12/31/2024	4:45:00	7.4	0.862	0	42,973	Open	10.7	119
12/31/2024	5:00:00	7.3	0.000	0	42,976	Closed	11.3	119
12/31/2024	5:15:00	7.3	0.000	0	42,976	Closed	12.4	119
12/31/2024	5:30:00	7.2	0.000	0	42,976	Closed	13.5	120
12/31/2024	5:45:00	7.2	0.000	0	42,976	Closed	14.5	119
12/31/2024	6:00:00	7.2	0.000	0	42,976	Closed	15.3	119
12/31/2024	6:15:00	7.3	0.847	0	42,980	Open	11	120
12/31/2024	6:30:00	7.4	0.877	0	42,993	Open	10.7	119
12/31/2024	6:45:00	7.4	0.000	0	43,002	Closed	10.9	119

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/31/2024	7:00:00	7.3	0.000	0	43,002	Closed	11.8	119
12/31/2024	7:15:00	7.2	0.000	0	43,002	Closed	12.9	119
12/31/2024	7:30:00	7.2	0.000	0	43,002	Closed	13.9	119
12/31/2024	7:45:00	7.2	0.896	0	43,003	Open	13.7	120
12/31/2024	8:00:00	7.3	0.869	0	43,016	Open	10.7	119
12/31/2024	8:15:00	7.4	0.000	0	43,029	Closed	10.7	119
12/31/2024	8:30:00	7.3	0.000	0	43,029	Closed	11.3	117
12/31/2024	8:45:00	7.3	0.000	0	43,029	Closed	12.2	118
12/31/2024	9:00:00	7.3	0.885	0	43,030	Open	11.3	119
12/31/2024	9:15:00	7.4	0.873	0	43,043	Open	10.5	118
12/31/2024	9:30:00	7.4	0.873	0	43,057	Open	10.3	116
12/31/2024	9:45:00	7.4	0.000	0	43,065	Closed	10.5	118
12/31/2024	10:00:00	7.3	0.000	0	43,065	Closed	11	114
12/31/2024	10:15:00	7.2	0.000	0	43,065	Closed	11.4	114
12/31/2024	10:30:00	7.2	0.000	0	43,065	Closed	11.7	113
12/31/2024	10:45:00	7.2	0.000	0	43,065	Closed	12	114
12/31/2024	11:00:00	7.3	0.851	0	43,077	Open	10.1	115
12/31/2024	11:15:00	7.4	0.824	0	43,090	Open	10.2	115
12/31/2024	11:30:00	7.3	0.000	0	43,091	Closed	10.8	116
12/31/2024	11:45:00	7.3	0.000	0	43,091	Closed	11.5	115
12/31/2024	12:00:00	7.3	0.000	0	43,097	Closed	10.3	114
12/31/2024	12:15:00	7.3	0.000	0	43,097	Closed	10.5	112
12/31/2024	12:30:00	7.2	0.000	0	43,097	Closed	11	114
12/31/2024	12:45:00	7.2	0.896	0	43,099	Open	10.7	115
12/31/2024	13:00:00	7.3	0.922	0	43,112	Open	10.2	113



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/31/2024	13:15:00	7.4	0.851	0	43,125	Open	10.1	113
12/31/2024	13:30:00	7.3	0.000	0	43,126	Closed	10.4	111
12/31/2024	13:45:00	7.3	0.000	0	43,126	Closed	10.7	111
12/31/2024	14:00:00	7.2	0.000	0	43,126	Closed	11.3	114
12/31/2024	14:15:00	7.2	0.000	0	43,126	Closed	11.9	114
12/31/2024	14:30:00	7.3	0.427	0	43,133	Open	10.5	114
12/31/2024	14:45:00	7.3	0.881	0	43,141	Open	10.4	114
12/31/2024	15:00:00	7.4	0.000	0	43,151	Closed	10.7	115
12/31/2024	15:15:00	7.3	0.000	0	43,151	Closed	11.3	116
12/31/2024	15:30:00	7.2	0.000	0	43,151	Closed	12	115
12/31/2024	15:45:00	7.2	0.000	0	43,151	Closed	12.5	113
12/31/2024	16:00:00	7.3	0.896	0	43,154	Open	10.6	114
12/31/2024	16:15:00	7.3	0.869	0	43,167	Open	10.6	114
12/31/2024	16:30:00	7.3	0.885	0	43,180	Open	10.5	113
12/31/2024	16:45:00	7.3	0.000	0	43,185	Closed	10.8	113
12/31/2024	17:00:00	7.2	0.000	0	43,185	Closed	11.1	111
12/31/2024	17:15:00	7.2	0.000	0	43,185	Closed	11.2	110
12/31/2024	17:30:00	7.2	0.000	0	43,185	Closed	11.4	110
12/31/2024	17:45:00	7.3	0.442	0	43,193	Open	10.4	111
12/31/2024	18:00:00	7.3	0.866	0	43,203	Open	10.1	109
12/31/2024	18:15:00	7.3	0.839	0	43,215	Open	10.1	108
12/31/2024	18:30:00	7.3	0.000	0	43,222	Closed	10.1	108
12/31/2024	18:45:00	7.2	0.000	0	43,222	Closed	10.3	111
12/31/2024	19:00:00	7.2	0.000	0	43,222	Closed	10.5	110
12/31/2024	19:15:00	7.1	0.000	0	43,222	Closed	10.6	111



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/31/2024	19:30:00	7.3	0.000	0	43,233	Open	10.1	110
12/31/2024	19:45:00	7.2	0.000	0	43,233	Open	10.6	113
12/31/2024	20:00:00	7.3	0.847	0	43,240	Open	10.4	115
12/31/2024	20:15:00	7.3	0.832	0	43,253	Open	10.8	117
12/31/2024	20:30:00	7.3	0.000	0	43,261	Open	11.2	117
12/31/2024	20:45:00	7.2	0.000	0	43,261	Closed	11.6	256
12/31/2024	21:00:00	7.2	0.000	0	43,261	Closed	12.3	259
12/31/2024	21:15:00	7.1	0.000	0	43,261	Closed	12.4	259
12/31/2024	21:30:00	7.2	0.378	0	43,265	Open	10.9	113
12/31/2024	21:45:00	7.3	0.881	0	43,274	Open	10.7	113
12/31/2024	22:00:00	7.3	0.000	0	43,284	Closed	10.8	113
12/31/2024	22:15:00	7.2	0.000	0	43,284	Closed	10.9	111
12/31/2024	22:30:00	7.1	0.000	0	43,284	Closed	11	110
12/31/2024	22:45:00	7.1	0.000	0	43,284	Closed	11.2	111
12/31/2024	23:00:00	7.1	0.816	0	43,286	Open	10.9	110
12/31/2024	23:15:00	7.2	0.858	0	43,299	Open	10.4	111
12/31/2024	23:30:00	7.3	0.386	0	43,309	Open	10.6	112
12/31/2024	23:45:00	7.2	0.000	0	43,312	Closed	10.7	113
1/1/2025	0:00:00	7.2	0.000	0	43,312	Closed	11.1	113
1/1/2025	0:15:00	7.2	0.000	0	43,315	Closed	10.8	114
1/1/2025	0:30:00	7.1	0.000	0	43,315	Closed	11.3	115
1/1/2025	0:45:00	7.1	0.000	0	43,315	Closed	11.9	116
1/1/2025	1:00:00	7.2	0.851	0	43,322	Open	10.4	113
1/1/2025	1:15:00	7.2	0.000	0	43,325	Open	10.6	113
1/1/2025	1:30:00	7.2	0.000	0	43,325	Closed	10.9	111

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/1/2025	1:45:00	7.3	0.835	0	43,332	Open	10.2	112
1/1/2025	2:00:00	7.3	0.816	0	43,345	Open	10.1	114
1/1/2025	2:15:00	7.3	0.828	0	43,357	Open	10.2	114
1/1/2025	2:30:00	7.3	0.000	0	43,359	Closed	10.6	115
1/1/2025	2:45:00	7.2	0.000	0	43,359	Closed	11.3	262
1/1/2025	3:00:00	7.1	0.000	0	43,359	Closed	12.1	262
1/1/2025	3:15:00	7.1	0.000	0	43,359	Closed	12.7	262
1/1/2025	3:30:00	7.1	0.000	0	43,359	Closed	13.3	262
1/1/2025	3:45:00	7.3	0.367	0	43,370	Open	10.4	113
1/1/2025	4:00:00	7.2	0.756	0	43,375	Open	11.3	116
1/1/2025	4:15:00	7.3	0.000	0	43,382	Closed	10.5	116
1/1/2025	4:30:00	7.2	0.000	0	43,382	Closed	11.1	116
1/1/2025	4:45:00	7.2	0.000	0	43,382	Closed	11.7	262
1/1/2025	5:00:00	7.2	0.816	0	43,390	Open	10.1	113
1/1/2025	5:15:00	7.3	0.000	0	43,400	Open	10	114
1/1/2025	5:30:00	7.2	0.000	0	43,400	Closed	10.4	113
1/1/2025	5:45:00	7.2	0.000	0	43,400	Closed	10.7	262
1/1/2025	6:00:00	7.2	0.824	0	43,409	Open	9.7	113
1/1/2025	6:15:00	7.3	0.839	0	43,421	Open	9.7	111
1/1/2025	6:30:00	7.2	0.000	0	43,423	Closed	9.9	110
1/1/2025	6:45:00	7.2	0.000	0	43,423	Closed	10.3	113
1/1/2025	7:00:00	7.1	0.000	0	43,423	Closed	11	263
1/1/2025	7:15:00	7.2	0.828	0	43,427	Open	10	116
1/1/2025	7:30:00	7.2	0.832	0	43,439	Open	10.2	117
1/1/2025	7:45:00	7.3	0.000	0	43,449	Closed	10.4	117



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/1/2025	8:00:00	7.2	0.000	0	43,449	Closed	11.1	119
1/1/2025	8:15:00	7.2	0.000	0	43,449	Closed	12.1	118
1/1/2025	8:30:00	7.1	0.000	0	43,449	Closed	12.9	255
1/1/2025	8:45:00	7.2	0.809	0	43,451	Open	10.5	114
1/1/2025	9:00:00	7.3	0.805	0	43,464	Open	10	113
1/1/2025	9:15:00	7.3	0.790	0	43,476	Open	10.1	117
1/1/2025	9:30:00	7.2	0.000	0	43,477	Closed	10.4	113
1/1/2025	9:45:00	7.2	0.000	0	43,477	Closed	10.7	113
1/1/2025	10:00:00	7.2	0.790	0	43,482	Open	9.8	112
1/1/2025	10:15:00	7.3	0.820	0	43,494	Open	9.7	112
1/1/2025	10:30:00	7.3	0.000	0	43,501	Closed	9.9	113
1/1/2025	10:45:00	7.3	0.000	0	43,501	Closed	10.2	113
1/1/2025	11:00:00	7.2	0.000	0	43,501	Closed	10.6	114
1/1/2025	11:15:00	7.1	0.000	0	43,501	Closed	11.4	116
1/1/2025	11:30:00	7.2	0.794	0	43,512	Open	10.1	116
1/1/2025	11:45:00	7.3	0.000	0	43,522	Closed	10.4	118
1/1/2025	12:00:00	7.2	0.748	0	43,523	Open	11	116
1/1/2025	12:15:00	7.3	0.000	0	43,533	Closed	10.4	116
1/1/2025	12:30:00	7.2	0.000	0	43,533	Closed	10.8	114
1/1/2025	12:45:00	7.2	0.000	0	43,533	Closed	11.2	115
1/1/2025	13:00:00	7.1	0.000	0	43,533	Closed	12	118
1/1/2025	13:15:00	7.1	0.000	0	43,533	Closed	12.9	256
1/1/2025	13:30:00	7.2	0.775	0	43,541	Open	10.4	118
1/1/2025	13:45:00	7.2	0.000	0	43,548	Closed	11	118
1/1/2025	14:00:00	7.2	0.000	0	43,548	Closed	11.5	118

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/1/2025	14:15:00	7.1	0.000	0	43,548	Closed	12.5	119
1/1/2025	14:30:00	7.1	0.265	0	43,548	Closed	13.4	119
1/1/2025	14:45:00	7.2	0.790	0	43,557	Open	10.7	119
1/1/2025	15:00:00	7.3	0.809	0	43,569	Open	10.5	118
1/1/2025	15:15:00	7.2	0.000	0	43,576	Closed	10.7	115
1/1/2025	15:30:00	7.2	0.000	0	43,576	Closed	11	115
1/1/2025	15:45:00	7.1	0.000	0	43,576	Closed	11.9	117
1/1/2025	16:00:00	7.2	0.816	0	43,581	Open	10.5	118
1/1/2025	16:15:00	7.3	0.798	0	43,594	Open	10.4	117
1/1/2025	16:30:00	7.3	0.000	0	43,604	Closed	10.5	117
1/1/2025	16:45:00	7.2	0.000	0	43,604	Closed	11.3	118
1/1/2025	17:00:00	7.2	0.000	0	43,604	Closed	12	116
1/1/2025	17:15:00	7.1	0.794	0	43,604	Open	13.1	118
1/1/2025	17:30:00	7.2	0.000	0	43,608	Closed	10.9	118
1/1/2025	17:45:00	7.2	0.000	76.2	43,608	Closed	10.9	117
1/1/2025	18:00:00	7.3	0.760	0	43,614	Open	10.3	115
1/1/2025	18:15:00	7.3	0.741	0	43,625	Open	10.3	117
1/1/2025	18:30:00	7.3	0.718	0	43,636	Open	10.5	117
1/1/2025	18:45:00	7.2	0.000	0	43,637	Closed	11.1	116
1/1/2025	19:00:00	7.2	0.000	0	43,637	Closed	12	118
1/1/2025	19:15:00	7.1	0.000	0	43,637	Open	12.8	118
1/1/2025	19:30:00	7.1	0.000	0	43,637	Open	13.4	253
1/1/2025	19:45:00	7.1	0.321	0	43,640	Open	16	255
1/1/2025	20:00:00	7.2	0.741	0	43,650	Open	10.6	118
1/1/2025	20:15:00	7.2	0.000	0	43,656	Open	10.8	118

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/1/2025	20:30:00	7.2	0.000	0	43,656	Open	11.6	119
1/1/2025	20:45:00	7.1	0.000	0	43,656	Open	12.6	118
1/1/2025	21:00:00	7.1	0.000	0	43,656	Open	13.6	255
1/1/2025	21:15:00	7.2	0.000	0	43,662	Open	11.1	119
1/1/2025	21:30:00	7.2	0.000	0	43,662	Closed	11.8	118
1/1/2025	21:45:00	7.2	0.771	0	43,665	Open	12	119
1/1/2025	22:00:00	7.3	0.767	0	43,677	Open	11	119
1/1/2025	22:15:00	7.3	0.775	0	43,689	Open	11	119
1/1/2025	22:30:00	7.3	0.000	0	43,695	Closed	11.5	121
1/1/2025	22:45:00	7.2	0.000	0	43,695	Closed	14.3	257
1/1/2025	23:00:00	7.1	0.000	0	43,695	Closed	15.9	253
1/1/2025	23:15:00	7.2	0.786	0	43,702	Open	11.2	122
1/1/2025	23:30:00	7.3	0.820	0	43,714	Open	11.2	121
1/1/2025	23:45:00	7.2	0.000	0	43,717	Closed	11.9	121
1/2/2025	0:00:00	7.2	0.000	0	43,717	Closed	13.6	121
1/2/2025	0:15:00	7.1	0.000	0	43,717	Closed	15.1	121
1/2/2025	0:30:00	7.1	0.000	0	43,717	Closed	16.6	252
1/2/2025	0:45:00	7.2	0.809	0	43,721	Open	11.3	121
1/2/2025	1:00:00	7.3	0.805	0	43,733	Open	10.9	119
1/2/2025	1:15:00	7.3	0.782	0	43,745	Open	10.7	119
1/2/2025	1:30:00	7.3	0.000	0	43,751	Closed	10.8	117
1/2/2025	1:45:00	7.2	0.000	0	43,751	Closed	11.9	118
1/2/2025	2:00:00	7.1	0.000	0	43,751	Closed	13.4	119
1/2/2025	2:15:00	7.1	0.000	0	43,751	Closed	15	121
1/2/2025	2:30:00	7.1	0.000	0	43,751	Closed	16.4	252

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/2/2025	2:45:00	7.2	0.771	0	43,757	Open	11.2	121
1/2/2025	3:00:00	7.3	0.794	0	43,769	Open	10.8	121
1/2/2025	3:15:00	7.3	0.000	0	43,777	Closed	11	121
1/2/2025	3:30:00	7.2	0.000	0	43,777	Closed	12.6	121
1/2/2025	3:45:00	7.1	0.000	0	43,777	Closed	14.4	121
1/2/2025	4:00:00	7.2	0.790	0	43,782	Open	10.9	122
1/2/2025	4:15:00	7.3	0.782	0	43,794	Open	10.8	122
1/2/2025	4:30:00	7.3	0.764	0	43,805	Open	10.8	122
1/2/2025	4:45:00	7.3	0.000	0	43,812	Closed	11.3	122
1/2/2025	5:00:00	7.2	0.000	0	43,812	Open	13	122
1/2/2025	5:15:00	7.1	0.000	0	43,812	Closed	14.8	259
1/2/2025	5:30:00	7.1	0.000	0	43,812	Closed	16.4	257
1/2/2025	5:45:00	7.1	0.000	0	43,812	Closed	17.7	259
1/2/2025	6:00:00	7.2	0.809	0	43,822	Open	11	122
1/2/2025	6:15:00	7.3	0.748	0	43,834	Open	11.1	122
1/2/2025	6:30:00	7.2	0.000	0	43,839	Closed	11.7	122
1/2/2025	6:45:00	7.2	0.000	0	43,839	Closed	13.6	122
1/2/2025	7:00:00	7.1	0.000	0	43,839	Closed	15.4	256
1/2/2025	7:15:00	7.1	0.000	0	43,839	Open	16.8	256
1/2/2025	7:30:00	7.3	0.779	0	43,848	Open	11.1	122
1/2/2025	7:45:00	7.3	0.760	0	43,859	Open	11.1	121
1/2/2025	8:00:00	7.2	0.000	0	43,864	Open	11.6	121
1/2/2025	8:15:00	7.2	0.000	0	43,864	Open	12.8	121
1/2/2025	8:30:00	7.1	0.000	0	43,864	Closed	14	119
1/2/2025	8:45:00	7.1	0.000	0	43,864	Closed	14.4	255

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/2/2025	9:00:00	7.1	0.507	0	43,867	Open	11.7	117
1/2/2025	9:15:00	7.2	0.813	0	43,875	Open	10.7	117
1/2/2025	9:30:00	7.3	0.767	0	43,887	Open	10.7	117
1/2/2025	9:45:00	7.2	0.000	0	43,891	Closed	11	116
1/2/2025	10:00:00	7.1	0.000	0	43,891	Closed	11.5	117
1/2/2025	10:15:00	7.1	0.000	0	43,891	Closed	12.4	118
1/2/2025	10:30:00	7.2	0.748	0	43,894	Open	10.7	115
1/2/2025	10:45:00	7.3	0.937	0	43,904	Open	10.4	114
1/2/2025	11:00:00	7.3	0.000	0	43,917	Closed	10.4	115
1/2/2025	11:15:00	7.2	0.000	0	43,917	Closed	11.2	118
1/2/2025	11:30:00	7.1	0.000	0	43,917	Closed	12.2	118
1/2/2025	11:45:00	7.1	0.000	0	43,917	Closed	12.9	255
1/2/2025	12:00:00	7.3	0.930	0	43,928	Open	10.5	117
1/2/2025	12:15:00	7.3	0.915	0	43,940	Open	10.5	118
1/2/2025	12:30:00	7.2	0.000	0	43,945	Closed	10.9	118
1/2/2025	12:45:00	7.2	0.000	0	43,945	Closed	11.7	118
1/2/2025	13:00:00	7.1	0.000	0	43,945	Closed	12.6	118
1/2/2025	13:15:00	7.1	0.896	0	43,946	Open	12.3	118
1/2/2025	13:30:00	7.3	0.915	0	43,960	Open	10.4	119
1/2/2025	13:45:00	7.3	0.000	0	43,970	Closed	10.6	119
1/2/2025	14:00:00	7.2	0.000	0	43,970	Closed	11.3	118
1/2/2025	14:15:00	7.1	0.000	0	43,970	Closed	12.2	118
1/2/2025	14:30:00	7.1	0.000	0	43,970	Closed	13.1	119
1/2/2025	14:45:00	7.1	0.828	0	43,972	Open	11.7	116
1/2/2025	15:00:00	7.2	0.397	0	43,979	Open	11.5	114

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/2/2025	15:15:00	7.2	0.824	0	43,992	Open	10	115
1/2/2025	15:30:00	7.2	0.000	0	43,996	Closed	10.5	116
1/2/2025	15:45:00	7.2	0.000	0	43,996	Closed	11.4	118
1/2/2025	16:00:00	7.1	0.000	0	43,996	Closed	16.6	256
1/2/2025	16:15:00	7.2	0.329	0	43,998	Open	12	118
1/2/2025	16:30:00	7.2	0.756	0	44,005	Open	10.3	119
1/2/2025	16:45:00	7.2	0.726	0	44,017	Open	10.5	116
1/2/2025	17:00:00	7.2	0.000	0	44,017	Closed	11	117
1/2/2025	17:15:00	7.1	0.000	0	44,017	Closed	11.9	118
1/2/2025	17:30:00	7.2	0.741	0	44,019	Open	11.2	119
1/2/2025	17:45:00	7.3	0.809	0	44,028	Open	10.4	118
1/2/2025	18:00:00	7.2	0.000	0	44,034	Closed	10.5	114
1/2/2025	18:15:00	7.2	0.813	0	44,037	Open	9.9	114
1/2/2025	18:30:00	7.2	0.805	0	44,049	Open	10.1	117
1/2/2025	18:45:00	7.2	0.000	0	44,060	Closed	10.5	118
1/2/2025	19:00:00	7.2	0.000	0	44,060	Closed	11.1	119
1/2/2025	19:15:00	7.1	0.000	0	44,060	Open	12.1	261
1/2/2025	19:30:00	7.1	0.000	0	44,060	Open	13	261
1/2/2025	19:45:00	7.1	0.000	0	44,060	Open	13.9	259
1/2/2025	20:00:00	7.2	0.782	0	44,066	Open	10.4	119
1/2/2025	20:15:00	7.2	0.782	0	44,078	Open	10.8	119
1/2/2025	20:30:00	7.2	0.000	0	44,086	Open	10.9	119
1/2/2025	20:45:00	7.1	0.000	0	44,086	Open	11.8	119
1/2/2025	21:00:00	7.1	0.499	298.6	44,086	Closed	11.1	118
1/2/2025	21:15:00	7.5	0.544	63.9	44,086	Closed	10.8	118

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/2/2025	21:30:00	7.4	0.760	16.2	44,086	Closed	10.8	118
1/2/2025	21:45:00	7.3	0.000	0	44,088	Closed	10.9	118
1/2/2025	22:00:00	7.3	0.779	0	44,090	Open	10.3	116
1/2/2025	22:15:00	7.3	0.786	0	44,102	Open	10.4	113
1/2/2025	22:30:00	7.3	0.779	0	44,114	Open	10.3	112
1/2/2025	22:45:00	7.2	0.000	0	44,114	Closed	10.4	111
1/2/2025	23:00:00	7.2	0.000	0	44,114	Closed	10.5	111
1/2/2025	23:15:00	7.1	0.000	0	44,114	Closed	10.6	111
1/2/2025	23:30:00	7.1	0.000	0	44,114	Closed	10.7	111
1/2/2025	23:45:00	7.1	0.000	0	44,114	Closed	11	114
1/3/2025	0:00:00	7.3	0.824	0	44,125	Open	9.9	111
1/3/2025	0:15:00	7.3	0.820	0	44,138	Open	10	113
1/3/2025	0:30:00	7.2	0.000	0	44,140	Closed	10.2	111
1/3/2025	0:45:00	7.2	0.000	0	44,140	Closed	10.2	110
1/3/2025	1:00:00	7.1	0.000	0	44,140	Closed	10.4	111
1/3/2025	1:15:00	7.1	0.000	0	44,140	Closed	10.5	110
1/3/2025	1:30:00	7.2	0.779	0	44,142	Open	10.4	114
1/3/2025	1:45:00	7.3	0.790	0	44,153	Open	10.1	116
1/3/2025	2:00:00	7.3	0.000	0	44,164	Closed	10.4	115
1/3/2025	2:15:00	7.2	0.000	0	44,164	Closed	10.6	116
1/3/2025	2:30:00	7.2	0.000	0	44,164	Closed	11.3	116
1/3/2025	2:45:00	7.2	0.000	0	44,164	Closed	12	118
1/3/2025	3:00:00	7.2	0.000	0	44,164	Closed	12.4	252
1/3/2025	3:15:00	7.3	0.756	0	44,174	Open	10.2	116
1/3/2025	3:30:00	7.3	0.775	0	44,186	Open	10.6	117

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/3/2025	3:45:00	7.2	0.000	0	44,190	Closed	11.4	116
1/3/2025	4:00:00	7.2	0.000	0	44,190	Closed	11.6	113
1/3/2025	4:15:00	7.2	0.000	0	44,190	Closed	11.6	111
1/3/2025	4:30:00	7.1	0.000	0	44,190	Closed	11.6	111
1/3/2025	4:45:00	7.2	0.756	0	44,192	Open	10.7	110
1/3/2025	5:00:00	7.3	0.748	0	44,203	Open	9.7	110
1/3/2025	5:15:00	7.3	0.730	0	44,214	Open	9.8	110
1/3/2025	5:30:00	7.2	0.000	0	44,217	Closed	9.9	112
1/3/2025	5:45:00	7.2	0.000	0	44,217	Closed	10.2	111
1/3/2025	6:00:00	7.2	0.000	0	44,217	Closed	10.5	113
1/3/2025	6:15:00	7.1	0.000	0	44,217	Closed	10.7	111
1/3/2025	6:30:00	7.1	0.000	0	44,217	Closed	11	114
1/3/2025	6:45:00	7.1	0.000	0	44,217	Closed	11.4	116
1/3/2025	7:00:00	7.3	0.741	0	44,225	Open	9.8	113
1/3/2025	7:15:00	7.3	0.760	0	44,237	Open	9.7	111
1/3/2025	7:30:00	7.3	0.745	0	44,248	Open	9.7	113
1/3/2025	7:45:00	7.3	0.000	0	44,258	Closed	9.6	111
1/3/2025	8:00:00	7.2	0.000	0	44,258	Closed	9.8	112
1/3/2025	8:15:00	7.2	0.000	0	44,258	Closed	9.9	110
1/3/2025	8:30:00	7.1	0.000	0	44,258	Closed	10	111
1/3/2025	8:45:00	7.1	0.000	0	44,258	Closed	10.1	110
1/3/2025	9:00:00	7.1	0.000	0	44,258	Closed	10.2	111
1/3/2025	9:15:00	7.3	0.733	0	44,261	Open	9.5	113
1/3/2025	9:30:00	7.3	0.718	0	44,272	Open	9.5	112
1/3/2025	9:45:00	7.3	0.726	0	44,283	Open	9.7	113

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/3/2025	10:00:00	7.3	0.703	0	44,294	Open	9.6	113
1/3/2025	10:15:00	7.3	0.397	72.2	44,295	Closed	9.6	113
1/3/2025	10:30:00	7.3	0.000	0	44,295	Closed	9.7	113
1/3/2025	10:45:00	7.2	0.000	0	44,295	Closed	9.9	111
1/3/2025	11:00:00	7.3	0.745	0	44,301	Open	9.5	113
1/3/2025	11:15:00	7.3	0.699	0	44,312	Open	9.6	115
1/3/2025	11:30:00	7.3	0.696	0	44,322	Open	9.5	115
1/3/2025	11:45:00	7.3	0.000	0	44,325	Closed	9.9	115
1/3/2025	12:00:00	7.2	0.000	0	44,325	Closed	10.6	263
1/3/2025	12:15:00	7.2	0.688	0	44,325	Open	11.7	261
1/3/2025	12:30:00	7.3	0.000	0	44,335	Closed	9.8	117
1/3/2025	12:45:00	7.4	0.654	22.2	44,335	Closed	9.9	114
1/3/2025	13:00:00	7.3	0.000	0	44,336	Closed	9.9	113
1/3/2025	13:15:00	7.3	0.760	0	44,340	Open	9.7	114
1/3/2025	13:30:00	7.3	0.771	0	44,351	Open	10	114
1/3/2025	13:45:00	7.3	0.752	0	44,363	Open	10.1	116
1/3/2025	14:00:00	7.3	0.000	0	44,370	Open	10.3	116
1/3/2025	14:15:00	7.2	0.000	0	44,371	Closed	10.5	116
1/3/2025	14:30:00	7.2	0.000	0	44,371	Closed	11.2	116
1/3/2025	14:45:00	7.1	0.000	0	44,371	Closed	13.4	261
1/3/2025	15:00:00	7.3	0.730	0	44,379	Open	10.3	118
1/3/2025	15:15:00	7.3	0.722	0	44,389	Open	10.7	117
1/3/2025	15:30:00	7.4	0.393	28.5	44,391	Closed	10.6	116
1/3/2025	15:45:00	7.4	0.386	12.5	44,391	Closed	10.6	114
1/3/2025	16:00:00	7.2	0.000	0	44,392	Closed	10.6	114

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/3/2025	16:15:00	7.3	0.851	0	44,394	Open	10.6	117
1/3/2025	16:30:00	7.3	0.824	0	44,407	Open	10.7	118
1/3/2025	16:45:00	7.3	0.801	0	44,419	Open	10.8	116
1/3/2025	17:00:00	7.3	0.000	0	44,428	Closed	11	117
1/3/2025	17:15:00	7.2	0.000	0	44,428	Closed	11.7	118
1/3/2025	17:30:00	7.1	0.000	0	44,428	Closed	12.3	261
1/3/2025	17:45:00	7.3	0.782	0	44,435	Open	10.7	118
1/3/2025	18:00:00	7.3	0.760	7.4	44,446	Open	10.8	118
1/3/2025	18:15:00	7.4	0.590	116.3	44,451	Closed	10.9	116
1/3/2025	18:30:00	7.3	0.000	12.3	44,452	Closed	10.9	118
1/3/2025	18:45:00	7.2	0.000	12.4	44,452	Closed	11.5	117
1/3/2025	19:00:00	7.3	0.684	11.9	44,453	Closed	10.9	118
1/3/2025	19:15:00	7.3	0.688	6.7	44,462	Open	11	117
1/3/2025	19:30:00	7.3	0.000	4.9	44,467	Open	11.3	118
1/3/2025	19:45:00	7.2	0.000	4.8	44,467	Open	12.1	118
1/3/2025	20:00:00	7.1	0.000	4.4	44,467	Open	12.9	256
1/3/2025	20:15:00	7.1	0.000	4.4	44,467	Open	13.7	256
1/3/2025	20:30:00	7.1	0.000	5.7	44,467	Closed	15.4	264
1/3/2025	20:45:00	7.3	0.658	0	44,476	Open	10.8	114
1/3/2025	21:00:00	7.3	0.684	0	44,486	Open	10.8	114
1/3/2025	21:15:00	7.3	0.272	100.3	44,491	Closed	10.7	114
1/3/2025	21:30:00	7.3	0.000	16.8	44,491	Closed	10.8	113
1/3/2025	21:45:00	7.2	0.000	7.6	44,491	Closed	10.9	112
1/3/2025	22:00:00	7.2	0.000	0	44,493	Closed	10.6	111
1/3/2025	22:15:00	7.1	0.000	0	44,493	Closed	10.7	110

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/3/2025	22:30:00	7.1	0.726	0	44,493	Closed	10.9	110
1/3/2025	22:45:00	7.3	0.805	0	44,505	Open	10.2	111
1/3/2025	23:00:00	7.3	0.775	0	44,517	Open	10.2	111
1/3/2025	23:15:00	7.2	0.000	0	44,519	Closed	10.4	111
1/3/2025	23:30:00	7.1	0.000	0	44,519	Closed	10.5	110
1/3/2025	23:45:00	7.2	0.000	0	44,520	Open	10.3	111
1/4/2025	0:00:00	7.1	0.000	0	44,520	Open	10.7	115
1/4/2025	0:15:00	7.1	0.000	0	44,520	Closed	11.2	114
1/4/2025	0:30:00	7.3	0.832	0	44,527	Open	10.1	113
1/4/2025	0:45:00	7.3	0.782	0	44,539	Open	10.1	113
1/4/2025	1:00:00	7.3	0.000	0	44,549	Closed	10.1	111
1/4/2025	1:15:00	7.2	0.000	0	44,549	Closed	10.3	111
1/4/2025	1:30:00	7.1	0.000	0	44,549	Closed	10.7	114
1/4/2025	1:45:00	7.1	0.748	6.2	44,549	Closed	11.4	114
1/4/2025	2:00:00	7.3	0.756	0	44,560	Open	10.1	113
1/4/2025	2:15:00	7.3	0.000	0	44,570	Closed	10	111
1/4/2025	2:30:00	7.2	0.000	0	44,570	Closed	11	114
1/4/2025	2:45:00	7.2	0.903	50.9	44,570	Closed	11.6	115
1/4/2025	3:00:00	7.2	0.000	1.6	44,570	Closed	10.6	114
1/4/2025	3:15:00	7.1	0.000	0	44,570	Closed	10.8	112
1/4/2025	3:30:00	7.3	0.782	0	44,575	Open	9.8	112
1/4/2025	3:45:00	7.3	0.779	0	44,586	Open	10	111
1/4/2025	4:00:00	7.3	0.714	0	44,597	Open	10	112
1/4/2025	4:15:00	7.3	0.000	0	44,604	Closed	10.3	114
1/4/2025	4:30:00	7.2	0.000	0	44,604	Closed	10.7	117

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/4/2025	4:45:00	7.1	0.000	0	44,604	Closed	11.2	116
1/4/2025	5:00:00	7.2	0.703	0	44,608	Open	10.4	116
1/4/2025	5:15:00	7.3	0.707	0	44,618	Open	10.4	117
1/4/2025	5:30:00	7.3	0.662	0	44,628	Open	10.4	116
1/4/2025	5:45:00	7.3	0.000	0	44,637	Closed	10.5	118
1/4/2025	6:00:00	7.2	0.000	0	44,637	Closed	11.2	116
1/4/2025	6:15:00	7.1	0.000	0	44,637	Closed	11.5	259
1/4/2025	6:30:00	7.1	0.000	0	44,637	Closed	11.6	262
1/4/2025	6:45:00	7.2	0.779	0	44,638	Open	11.2	113
1/4/2025	7:00:00	7.3	0.801	0	44,650	Open	10	270
1/4/2025	7:15:00	7.3	0.809	0	44,662	Open	10.1	272
1/4/2025	7:30:00	7.2	0.000	0	44,669	Closed	10.4	274
1/4/2025	7:45:00	7.1	0.000	0	44,669	Closed	11.2	276
1/4/2025	8:00:00	7.1	0.000	0	44,669	Closed	12.1	276
1/4/2025	8:15:00	7.1	0.000	0	44,669	Closed	12.9	276
1/4/2025	8:30:00	7.1	0.745	0	44,669	Open	13	268
1/4/2025	8:45:00	7.2	0.748	0	44,681	Open	10.3	274
1/4/2025	9:00:00	7.2	0.714	0	44,692	Open	10.3	279
1/4/2025	9:15:00	7.2	0.696	0	44,702	Open	10.2	275
1/4/2025	9:30:00	7.2	0.000	0	44,702	Closed	12.5	282
1/4/2025	9:45:00	7.1	0.000	0	44,702	Closed	14.2	282
1/4/2025	10:00:00	7.1	0.000	0	44,702	Closed	14.4	282
1/4/2025	10:15:00	7.2	0.722	0	44,711	Open	10.2	272
1/4/2025	10:30:00	7.2	0.673	0	44,721	Open	10.1	269
1/4/2025	10:45:00	7.2	0.374	52.4	44,723	Closed	10	267



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/4/2025	11:00:00	7.2	0.000	8.1	44,723	Closed	10.2	267
1/4/2025	11:15:00	7.1	0.000	5.3	44,723	Closed	10.8	267
1/4/2025	11:30:00	7.2	0.522	0	44,724	Closed	10.1	273
1/4/2025	11:45:00	7.2	0.646	0	44,733	Open	9.9	270
1/4/2025	12:00:00	7.3	0.597	0	44,742	Open	9.5	269
1/4/2025	12:15:00	7.3	0.586	0	44,751	Open	9.2	111
1/4/2025	12:30:00	7.2	0.000	0	44,757	Closed	9.3	111
1/4/2025	12:45:00	7.1	0.000	0	44,757	Closed	9.5	268
1/4/2025	13:00:00	7.1	0.000	0	44,757	Closed	9.7	266
1/4/2025	13:15:00	7.1	0.000	0	44,757	Closed	10.1	266
1/4/2025	13:30:00	7.1	0.000	0	44,757	Closed	10.5	266
1/4/2025	13:45:00	7.1	0.000	0	44,757	Closed	10.9	268
1/4/2025	14:00:00	7.1	0.000	0	44,757	Closed	11.2	268
1/4/2025	14:15:00	7	0.000	0	44,757	Closed	11.2	264
1/4/2025	14:30:00	7.2	0.677	0	44,763	Open	9.1	111
1/4/2025	14:45:00	7.2	0.665	0	44,773	Open	9.3	112
1/4/2025	15:00:00	7.3	0.620	0	44,782	Open	9.3	116
1/4/2025	15:15:00	7.3	0.616	0	44,792	Open	9.5	116
1/4/2025	15:30:00	7.2	0.000	0	44,794	Closed	10	116
1/4/2025	15:45:00	7.1	0.000	0	44,794	Closed	10.5	115
1/4/2025	16:00:00	7.2	0.601	0	44,795	Open	9.9	116
1/4/2025	16:15:00	7.2	0.665	0	44,805	Open	10.2	116
1/4/2025	16:30:00	7.1	0.703	0	44,815	Open	10.9	117
1/4/2025	16:45:00	7.1	0.352	0	44,821	Closed	12.2	116
1/4/2025	17:00:00	7.3	0.408	13	44,821	Closed	10.3	116

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/4/2025	17:15:00	7.3	0.000	0.6	44,821	Closed	10.4	116
1/4/2025	17:30:00	7.2	0.000	0	44,821	Closed	10.9	117
1/4/2025	17:45:00	7.1	0.000	0	44,821	Closed	11.3	259
1/4/2025	18:00:00	7.2	0.798	0	44,829	Open	10.7	115
1/4/2025	18:15:00	7.1	0.764	0	44,841	Open	11.1	116
1/4/2025	18:30:00	7.1	0.775	0	44,853	Open	11.8	258
1/4/2025	18:45:00	7.1	0.000	0	44,861	Closed	12.1	259
1/4/2025	19:00:00	7.1	0.000	0	44,861	Closed	12.2	259
1/4/2025	19:15:00	7	0.000	0	44,861	Closed	12.2	259
1/4/2025	19:30:00	7.1	0.000	0	44,861	Closed	14.6	259
1/4/2025	19:45:00	7.2	0.718	31.9	44,861	Closed	14.7	258
1/4/2025	20:00:00	7.1	0.752	0	44,872	Open	11.4	116
1/4/2025	20:15:00	7.1	0.000	0	44,883	Closed	12.1	118
1/4/2025	20:30:00	7.1	0.000	0	44,883	Closed	12.9	258
1/4/2025	20:45:00	7.1	0.000	0	44,883	Closed	14.1	261
1/4/2025	21:00:00	7.1	0.722	0.2	44,883	Open	15.1	255
1/4/2025	21:15:00	7.1	0.718	1	44,894	Open	12.5	118
1/4/2025	21:30:00	7.1	0.000	0.8	44,898	Open	13.7	256
1/4/2025	21:45:00	7.1	0.000	0.9	44,898	Closed	14.2	257
1/4/2025	22:00:00	7.1	0.000	25.5	44,898	Closed	14.4	258
1/4/2025	22:15:00	7.2	0.000	50.2	44,898	Closed	14.8	256
1/4/2025	22:30:00	7.2	0.000	21.8	44,898	Closed	12.4	115
1/4/2025	22:45:00	7.2	0.824	0	44,901	Open	11.1	114
1/4/2025	23:00:00	7.2	0.809	0	44,913	Open	11.5	114
1/4/2025	23:15:00	7.1	0.820	0	44,925	Open	12.1	116

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/4/2025	23:30:00	7.1	0.801	0	44,937	Open	12.8	116
1/4/2025	23:45:00	7.1	0.000	0	44,939	Closed	13.5	255
1/5/2025	0:00:00	7.1	0.000	0	44,939	Closed	18.5	258
1/5/2025	0:15:00	7	0.000	0	44,939	Closed	19.3	256
1/5/2025	0:30:00	7.1	0.000	0	44,939	Closed	19.3	256
1/5/2025	0:45:00	7.1	0.794	0	44,946	Open	12.6	119
1/5/2025	1:00:00	7.1	0.771	0	44,957	Open	12.8	119
1/5/2025	1:15:00	7.1	0.000	0	44,965	Closed	13.5	119
1/5/2025	1:30:00	7.1	0.000	0	44,965	Closed	14.2	256
1/5/2025	1:45:00	7.1	0.000	0	44,965	Closed	14.8	253
1/5/2025	2:00:00	7.1	0.000	0	44,965	Closed	15.3	253
1/5/2025	2:15:00	7.1	0.760	0	44,971	Open	12.1	119
1/5/2025	2:30:00	7.2	0.000	18.4	44,980	Closed	12.7	118
1/5/2025	2:45:00	7.1	0.000	19.8	44,980	Closed	12.7	120
1/5/2025	3:00:00	7.1	0.000	13.4	44,980	Closed	14.1	118
1/5/2025	3:15:00	7.1	0.000	16.1	44,980	Closed	14.6	119
1/5/2025	3:30:00	7.1	0.000	10.2	44,980	Closed	15.4	252
1/5/2025	3:45:00	7.2	0.790	0	44,988	Open	11.3	118
1/5/2025	4:00:00	7.1	0.782	0	44,999	Open	12	119
1/5/2025	4:15:00	7.1	0.764	0	45,011	Open	12.6	119
1/5/2025	4:30:00	7.1	0.000	0	45,011	Closed	13.3	118
1/5/2025	4:45:00	7.1	0.000	0	45,011	Closed	14	253
1/5/2025	5:00:00	7.1	0.000	0	45,011	Closed	14.8	253
1/5/2025	5:15:00	7.2	0.756	0	45,019	Open	11.9	119
1/5/2025	5:30:00	7.1	0.760	0	45,030	Open	12.5	119



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/5/2025	5:45:00	7.1	0.726	0	45,042	Open	13.4	258
1/5/2025	6:00:00	7.1	0.000	0	45,046	Closed	14	256
1/5/2025	6:15:00	7.1	0.000	0	45,046	Closed	14.5	256
1/5/2025	6:30:00	7.1	0.000	0	45,046	Closed	15.1	255
1/5/2025	6:45:00	7	0.000	0	45,046	Open	15.7	256
1/5/2025	7:00:00	7	0.000	0	45,046	Closed	16.2	255
1/5/2025	7:15:00	7.2	0.760	0	45,055	Open	11.5	119
1/5/2025	7:30:00	7.1	0.718	0	45,067	Open	12.4	264
1/5/2025	7:45:00	7.1	0.000	0	45,074	Closed	13.2	264
1/5/2025	8:00:00	7.1	0.000	0	45,074	Closed	14	265
1/5/2025	8:15:00	7.1	0.000	0	45,074	Closed	14.7	266
1/5/2025	8:30:00	7	0.000	0	45,074	Closed	14.7	262
1/5/2025	8:45:00	7.1	0.722	0	45,078	Open	10.9	262
1/5/2025	9:00:00	7.1	0.733	0	45,089	Open	11.2	264
1/5/2025	9:15:00	7.1	0.703	0	45,099	Open	12.6	266
1/5/2025	9:30:00	7.1	0.000	0	45,108	Closed	12.9	263
1/5/2025	9:45:00	7.1	0.000	0	45,108	Closed	13.1	265
1/5/2025	10:00:00	7.1	0.000	0	45,108	Closed	13.6	266
1/5/2025	10:15:00	7.1	0.000	0	45,108	Closed	14.1	266
1/5/2025	10:30:00	7.1	0.680	0	45,117	Open	11.7	118
1/5/2025	10:45:00	7.1	0.692	0	45,128	Open	12.3	261
1/5/2025	11:00:00	7.1	0.000	0	45,131	Closed	11.7	116
1/5/2025	11:15:00	7.1	0.000	0	45,131	Closed	12.2	259
1/5/2025	11:30:00	7.1	0.000	0	45,131	Closed	12.8	259
1/5/2025	11:45:00	7.1	0.000	0	45,131	Closed	13.3	258



Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/5/2025	12:00:00	7.1	0.658	0	45,139	Open	11.2	117
1/5/2025	12:15:00	7.1	0.680	0	45,150	Open	11.9	259
1/5/2025	12:30:00	7.1	0.639	0	45,159	Open	12.7	259
1/5/2025	12:45:00	7.3	0.420	11.8	45,160	Closed	10.7	116
1/5/2025	13:00:00	7.3	0.446	8.5	45,160	Closed	10.6	114
1/5/2025	13:15:00	7.2	0.000	0	45,160	Closed	10.6	114
1/5/2025	13:30:00	7.1	0.000	0	45,160	Closed	11	263
1/5/2025	13:45:00	7.2	0.722	0	45,162	Open	10.6	116
1/5/2025	14:00:00	7.2	0.722	0	45,173	Open	10.8	116
1/5/2025	14:15:00	7.2	0.714	0	45,184	Open	11	117
1/5/2025	14:30:00	7.2	0.000	0	45,194	Closed	11	114
1/5/2025	14:45:00	7.1	0.000	0	45,194	Closed	12.8	258
1/5/2025	15:00:00	7.1	0.000	0	45,194	Closed	13.1	256
1/5/2025	15:15:00	7.1	0.000	0	45,194	Closed	13.2	259
1/5/2025	15:30:00	7.2	0.658	0	45,195	Open	11.3	113
1/5/2025	15:45:00	7.2	0.696	0	45,206	Open	10.9	113
1/5/2025	16:00:00	7.2	0.677	0	45,216	Open	11	114
1/5/2025	16:15:00	7.2	0.000	0	45,218	Closed	11.3	113
1/5/2025	16:30:00	7.1	0.000	0	45,218	Closed	11.6	113
1/5/2025	16:45:00	7.1	0.000	0	45,218	Closed	13.8	256
1/5/2025	17:00:00	7.1	0.665	0	45,219	Open	11.7	113
1/5/2025	17:15:00	7.2	0.662	0	45,229	Open	11	115
1/5/2025	17:30:00	7.2	0.646	0	45,239	Open	11.1	116
1/5/2025	17:45:00	7.2	0.000	0	45,242	Closed	11.4	116
1/5/2025	18:00:00	7.3	0.321	46.7	45,242	Closed	11.3	116

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/5/2025	18:15:00	7.3	0.745	162.4	45,242	Closed	11.1	113
1/5/2025	18:30:00	7.2	0.737	0	45,247	Open	11	113
1/5/2025	18:45:00	7.2	0.000	1.7	45,255	Closed	11.4	115
1/5/2025	19:00:00	7.1	0.000	1.6	45,255	Closed	11.9	116
1/5/2025	19:15:00	7.2	0.718	0	45,257	Open	11.4	115
1/5/2025	19:30:00	7.3	0.000	0.8	45,263	Open	11.5	114
1/5/2025	19:45:00	7.2	0.677	0	45,266	Open	11.5	116
1/5/2025	20:00:00	7.2	0.688	0	45,276	Open	11.9	116
1/5/2025	20:15:00	7.1	0.684	0	45,287	Open	12.2	115
1/5/2025	20:30:00	7.1	0.000	0	45,292	Open	12.6	117
1/5/2025	20:45:00	7.1	0.000	2.7	45,292	Open	16	256
1/5/2025	21:00:00	7.1	0.624	0	45,293	Open	17.4	254
1/5/2025	21:15:00	7.1	0.646	0	45,302	Open	17.8	253
1/5/2025	21:30:00	7.1	0.559	0	45,312	Open	18	255
1/5/2025	21:45:00	7.1	0.665	0	45,322	Open	18.2	253
1/5/2025	22:00:00	7.1	0.000	0	45,328	Open	18.4	253
1/5/2025	22:15:00	7	0.000	0	45,330	Open	20	250
1/5/2025	22:30:00	7	0.000	0	45,330	Open	19.9	251
1/5/2025	22:45:00	7	0.000	0	45,330	Open	19.3	252
1/5/2025	23:00:00	7	0.000	0	45,330	Closed	18.9	252
1/5/2025	23:15:00	7.2	0.926	0	45,342	Open	11.6	114
1/5/2025	23:30:00	7.2	0.858	0	45,356	Open	11.2	117
1/5/2025	23:45:00	7.1	0.000	0	45,358	Closed	11.7	116

Title	WoodFibre Weekly Water Discharge Report	Revision:	0
Data Date Range	December 30th 2024 to January 5th 2025	Prepared by: Approved by: Date:	SD BC2 January 14, 2025

Photos:

Photo 1: No visible sheen observed in the WTP water, January 2nd



Photo 2: No visible sheen observed in the WTP water, January 3rd





FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2024-12-30-Chycoski-3ECA0

Project Component:	Tunnel	Site Name:	WLNG Treatment Discharge
Inspection Date:	12/30/2024	Location:	WLNG
Triton QP:	Lily Chycoski	Latitude/Longitude:	49.669012 -123.250081
Temperature(c): Low 0 High 4		Permit:	PE 110136
Weather Conditions:	Light Rain	Ground Conditions:	Wet

Observations

Time: 13:26:00 **Flow Volume (visual):** N/A
Notes: First day of continuous seven day sample, coinciding with starting tunnel drilling.
Odour Detected?: No **Notes:**
Unusual Colour?: No **Notes:**
Unusual Observations?: No **Notes:**
Sheen on Water?: No **Notes:**

Samples Collected - Parameters

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

Logger Maintenance

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

Photos



Photo: 1
Location: WLNG EOP
Description: Discharge spigot.



Photo: 2
Location: WLNG EOP
Description: Spigot on.

Photos



Photo: 3
Location: WLNG EOP
Description: Lab COC



Sign Off

Report Prepared By: Lily Chycoski

Report Reviewed: Yes

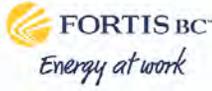
Report Reviewer:

Professional(s) of Record:

Name:

Designation:

Designation Number:



FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2024-12-31-Chycoski-608AA

Project Component:	Tunnel	Site Name:	WLNG Treatment Discharge
Inspection Date:	12/31/2024	Location:	WLNG
Triton QP:	Lily Chycoski	Latitude/Longitude:	49.669338 -123.249766
Temperature(c):	Low 3 High 6	Permit:	PE 110136
Weather Conditions:	Overcast	Ground Conditions:	Wet

Observations

Time: 10:01:00 **Flow Volume (visual):** N/A

Notes:

Odour Detected?: No **Notes:**

Unusual Colour?: No **Notes:**

Unusual Observations?: No **Notes:**

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

Samples Collected - Parameters

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

Logger Maintenance

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

Photos



Photo: 1
Location: WLNG EOP
Description: Discharge spigot



Photo: 2
Location: WLNG EOP
Description: Spigot on

Photos

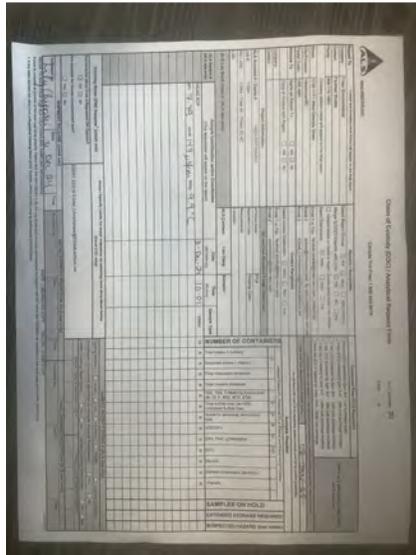


Photo: 3
Location: WLNG EOP
Description: Lab COC



Sign Off

Report Prepared By: Lily Chycoski

Report Reviewed: Yes

Report Reviewer:

Professional(s) of Record:

Name:

Designation:

Designation Number:

Project Component:	Tunnel	Site Name:	WLNG Treatment Discharge
Inspection Date:	01/02/2025	Location:	WLNG
Triton QP:	Lily Chycoski	Latitude/Longitude:	49.669431 -123.249795
Temperature(c): Low 1 High 3		Permit:	PE 110136
Weather Conditions:	Overcast	Ground Conditions:	Damp

Observations

Time: 10:54:00 **Flow Volume (visual):** N/A

Notes: Submitted WLNG EOP sample from Jan 1st (sampled by Stefan) with this sample.

Odour Detected?: No **Notes:**

Unusual Colour?: No **Notes:**

Unusual Observations?: No **Notes:**

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

Samples Collected - Parameters

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

Logger Maintenance

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

Describe Logger Maintenance

Photos



Photo: 1
Location: WLNG EOP
Description: Discharge spigot



Photo: 2
Location: WLNG EOP
Description: Spigot on

Photos

Chain of Custody (COC) / Analytical Request Form
Canada Toll Free: 1 800 668 8613

Client Information
 Company: Fortis BC
 Contact: [Blank]
 Project Name: WLNW EOP
 Project Location: [Blank]

Project Information
 Project Name: WLNW EOP
 Project Location: [Blank]

Sample Receipt
 Sample ID: WLNW EOP
 Date: 02-Jan-25
 Time: 10:57
 Location: [Blank]

Handwritten Data:
 WLNW EOP
 pH=7.28 Cond=180.4 us/cm
 Temp=9.1°C

Table: NUMBER OF CONTAINERS

Container No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
WLNW EOP																					

Signature: Kelly Chycoski, 2 Jan 25 14:15

Photo: 3
Location: WLNW EOP
Description: Lab COC



Sign Off

Report Prepared By: Lily Chycoski

Report Reviewed: Yes

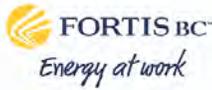
Report Reviewer:

Professional(s) of Record:

Name:

Designation:

Designation Number:



FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-3-Chycoski-573A6

Project Component:	Tunnel	Site Name:	WLNG Treatment Discharge
Inspection Date:	01/03/2025	Location:	WLNG
Triton QP:	Lily Chycoski	Latitude/Longitude:	49.669328 -123.249831
Temperature(c):	Low -2 High 4	Permit:	PE 110136
Weather Conditions:	Overcast	Ground Conditions:	Damp

Observations

Time: 10:09:00 **Flow Volume (visual):** N/A

Notes:

Odour Detected?: No **Notes:**

Unusual Colour?: No **Notes:**

Unusual Observations?: No **Notes:**

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

Samples Collected - Parameters

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

Logger Maintenance

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

Photos



Photo: 1
Location: WLNG EOP
Description: Discharge sampling spigot



Photo: 2
Location: WLNG EOP
Description: Spigot on

Photos

ALS Chain of Custody (COC) Analytical Request Form

Client Information:
Company: WLN
Project Name: WLN
Site: WLN
Requestor: WLN
Requestor Contact: WLN
Requestor Phone: WLN
Requestor Email: WLN

Sample Information:
Sample ID: WLN
Sample Description: WLN
Sample Location: WLN
Sample Date: 03 JAN 25
Sample Time: 10.09

NO.	DATE	TIME	INITIALS	TESTS	REMARKS
1	03 JAN 25	10.09			
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Signature: [Signature]
Date: 03 JAN 25

Photo: 3
Location: WLN EOP
Description: Lab COC



2025-1-3-Chycoski-573A6

Sign Off

Report Prepared By: Lily Chycoski

Report Reviewed: Yes

Report Reviewer:

Professional(s) of Record:

Name:

Designation:

Designation Number:



FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-4-Shafiei-1074C

Project Component:	Tunnel	Site Name:	WLNG Treatment Discharge
Inspection Date:	01/04/2025	Location:	WLNG
Triton QP:	Farshad Shafiei	Latitude/Longitude:	49.669428 -123.249697
Temperature(c): Low 0 High 5		Permit:	PE 110136
Weather Conditions:	Light Rain	Ground Conditions:	Wet

Observations

Time: 11:01:14 **Flow Volume (visual):** low
Notes: The water treatment plant didn't have enough water
Odour Detected?: No **Notes:**
Unusual Colour?: No **Notes:**
Unusual Observations?: No **Notes:**
Sheen on Water?: No **Notes:**

Samples Collected - Parameters

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

Logger Maintenance

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

Photos



Photo: 1
Location: EOP
Description: Sampling location

Phone #: 604-253-4188

ALS Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 669 9878

Page 1 of 2

Project # 1184

ALS Account # / Quote # VAD-TRT-00-012

Job # 1184

PC/A/E: 1184 - Tank 30 - Phase 3C-AC

ALS Lab Work Order # 218 (ALS use only)

Sample Identification and/or Coordinates (This description will appear on the report)

WILNG EOP cont 195

Temp 9.4

Date 4-Jan-25 11:05

Wider

Number of Containers: 15

ALS Contact: Can Dang

Sampler:

Drinking Water (DW) Samples? (client use)

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

Are samples taken from a Regulated DW System? Yes No

Are samples for human consumption use? Yes No

ESDAT EDD by EShafiei_CAF@fortisbc.com

Released by: [Signature]

Time: 15:05

Received by: [Signature]

Time: [Blank]

WHERE LABORATORY COPY - WEEDS - CLEAN COPY

REFER TO BACK PAGE FOR ALL LOCATIONS AND SAMPLE INFORMATION

If fails to complete all portions of this form may delay analysis. Please fill in this form LEGALLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of this form.

If any water samples are taken from a Regulated Drinking Water (RDW) System, please advise us at 1-800-669-9878.

Photo: 2
Location: Coc
Description: Lab COC

Sign Off

Report Prepared By: Farshad Shafiei

Report Reviewed: Yes

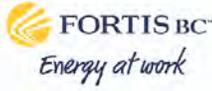
Report Reviewer:

Professional(s) of Record:

Name:

Designation:

Designation Number:



FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-5-Shafiei-6B67D

Project Component:	Tunnel	Site Name:	WLNG Treatment Discharge
Inspection Date:	01/05/2025	Location:	WLNG
Triton QP:	Farshad Shafiei	Latitude/Longitude:	49.66902 -123.250079
Temperature(c):	Low 1 High 6	Permit:	PE 110136
Weather Conditions:	Clear	Ground Conditions:	Wet

Observations

Time: 09:38:19 **Flow Volume (visual):** moderate

Notes:

Odour Detected?: No **Notes:**

Unusual Colour?: No **Notes:**

Unusual Observations?: No **Notes:**

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

Samples Collected - Parameters

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

Logger Maintenance

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

Photos



Photo: 1
Location: EOP
Description: Sample Location



Photo: 2
Location: COC
Description: Lab COC

Sign Off

Report Prepared By:

Report Reviewed: Yes

Report Reviewer:

Professional(s) of Record:

Name:

Designation:

Designation Number:

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix D	D-1

Appendix D: Woodfibre Site Receiving Environment Documentation

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix D	D-2

Woodfibre Site Receiving Environment Sample Analysis

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix D	D-3

Woodfibre Site Receiving Environment Lab Documentation



CERTIFICATE OF ANALYSIS

Work Order : VA25A0059

Client : Triton Environmental Consultants Ltd.
 Contact : [Redacted]
 Address : [Redacted]
 Telephone : [Redacted]
 Project : [Redacted]
 PO : [Redacted]
 C-O-C number : ----
 Sampler : ----
 Site : Water Analysis
 Quote number : VA23-TRIT100-012
 No. of samples received : 2
 No. of samples analysed : 2

Laboratory : [Redacted]
 Account Manager : [Redacted]
 Address : [Redacted]
 Telephone : [Redacted]
 Date Samples Received : 02-Jan-2025 14:20
 Date Analysis Commenced : 03-Jan-2025
 Issue Date : 10-Jan-2025 09:07

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

Signatories	Position	Laboratory Department
[Redacted]	[Redacted]	Metals, Burnaby, British Columbia
[Redacted]	[Redacted]	Metals, Burnaby, British Columbia
[Redacted]	[Redacted]	Inorganics, Burnaby, British Columbia
[Redacted]	[Redacted]	Administration, Burnaby, British Columbia
[Redacted]	[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
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 US 1	WLNG DS 1	----	----	----
Client sampling date / time					02-Jan-2025 09:30	02-Jan-2025 09:55	----	----	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0059-001	VA25A0059-002	----	----	----	
					Result	Result	----	----	----	
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm	21.000	64.000	----	----	----	
pH, field	----	EF001/VA	0.10	pH units	7.69	7.91	----	----	----	
Temperature, field	----	EF001/VA	0.10	°C	5.70	6.40	----	----	----	
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L	4.65	22.1	----	----	----	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	5.00	19.6	----	----	----	
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	14	36	----	----	----	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	<3.0	----	----	----	
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	4.2	18.8	----	----	----	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	<0.0050	<0.0050	----	----	----	
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L	<0.050	<0.050	----	----	----	
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L	0.64	2.16	----	----	----	
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	<0.020	0.066	----	----	----	
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.0192	0.0171	----	----	----	
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	0.063	0.113	----	----	----	
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0092	0.0085	----	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	1.89	3.18	----	----	----	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	1.58	1.45	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	02-Jan-2025 09:30	02-Jan-2025 09:55	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0059-001	VA25A0059-002	----	----	----	----
					Result	Result	----	----	----	----
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	<0.0015	----	----	----	----
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	<0.0015	----	----	----	----
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	<0.0016	----	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0821	0.0726	----	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	<0.00010	0.00030	----	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00022	0.00052	----	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00233	0.00345	----	----	----	----
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	0.0000071	0.0000079	----	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	1.67	7.14	----	----	----	----
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	0.00062	<0.00050	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	0.028	0.021	----	----	----	----
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	0.0018	----	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	0.203	0.444	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	02-Jan-2025 09:30	02-Jan-2025 09:55	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0059-001	VA25A0059-002	----	----	----	
					Result	Result	----	----	----	
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00140	0.00242	----	----	----	
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	0.000302	0.00622	----	----	----	
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	0.148	0.687	----	----	----	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00023	0.00113	----	----	----	
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	3.75	4.36	----	----	----	
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	1.08	2.39	----	----	----	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.00874	0.0184	----	----	----	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	<0.50	0.97	----	----	----	
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	0.00058	0.00058	----	----	----	
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	<0.00010	0.00030	----	----	----	
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.000138	0.00107	----	----	----	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNQ US 1	WLNQ DS 1	----	----	----
					Client sampling date / time	02-Jan-2025 09:30	02-Jan-2025 09:55	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0059-001	VA25A0059-002	----	----	----	----
					Result	Result	----	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	<0.0030	0.0069	----	----	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	<0.00020	----	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0691	0.0576	----	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	<0.00010	0.00031	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	0.00012	0.00038	----	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00226	0.00352	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L	<0.000100	<0.000100	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L	<0.010	<0.010	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000050	0.0000069	----	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	1.54	8.11	----	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	<0.000010	0.000014	----	----	----	----
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	0.00057	0.00038	----	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	0.016	0.011	----	----	----	----
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	0.0021	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	0.196	0.448	----	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00072	0.00201	----	----	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	02-Jan-2025 09:30	02-Jan-2025 09:55	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0059-001	VA25A0059-002	----	----	----	
					Result	Result	----	----	----	
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L	<0.0000050	<0.0000050	----	----	----	
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	0.000265	0.00661	----	----	----	
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	0.154	0.697	----	----	----	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00020	0.00118	----	----	----	
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	3.53	4.34	----	----	----	
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	1.07	2.35	----	----	----	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.00761	0.0200	----	----	----	
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	<0.50	0.96	----	----	----	
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	0.00032	----	----	----	
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L	0.000116	0.00121	----	----	----	
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	0.0013	0.0070	----	----	----	



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	02-Jan-2025 09:30	02-Jan-2025 09:55	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0059-001	VA25A0059-002	----	----	----	----
					Result	Result	----	----	----	----
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	<0.00040 ^{DLM}	<0.00020	----	----	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	Field	----	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-	Field	Field	----	----	----	----
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	----

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

QUALITY CONTROL INTERPRETIVE REPORT

Work Order : VA25A0059

Client : [REDACTED]
Contact : [REDACTED]
Address : [REDACTED]

Telephone : [REDACTED]
Project : [REDACTED]
PO : [REDACTED]
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 15
Laboratory : [REDACTED]
Account Manager : [REDACTED]
Address : [REDACTED]

Telephone : [REDACTED]
Date Samples Received : 02-Jan-2025 14:20
Issue Date : 10-Jan-2025 09:07

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Boron, dissolved	7440-42-8	E421	135 % ^{MES}	70.0-130%	Recovery greater than upper data quality objective
Dissolved Metals	Anonymous	Anonymous	Molybdenum, dissolved	7439-98-7	E421	134 % ^{MES}	70.0-130%	Recovery greater than upper data quality objective

Result Qualifiers

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



Analysis Holding Time Compliance

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

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

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

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

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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) WLNG DS 1	E298	02-Jan-2025	04-Jan-2025	28 days	2 days	✔	06-Jan-2025	28 days	4 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) WLNG US 1	E298	02-Jan-2025	04-Jan-2025	28 days	2 days	✔	06-Jan-2025	28 days	4 days	✔	
Anions and Nutrients : Bromide in Water by IC (Low Level)											
HDPE WLNG DS 1	E235.Br-L	02-Jan-2025	03-Jan-2025	28 days	1 days	✔	03-Jan-2025	28 days	1 days	✔	
Anions and Nutrients : Bromide in Water by IC (Low Level)											
HDPE WLNG US 1	E235.Br-L	02-Jan-2025	03-Jan-2025	28 days	1 days	✔	03-Jan-2025	28 days	1 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE WLNG DS 1	E235.Cl	02-Jan-2025	03-Jan-2025	28 days	1 days	✔	03-Jan-2025	28 days	1 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE WLNG US 1	E235.Cl	02-Jan-2025	03-Jan-2025	28 days	1 days	✔	03-Jan-2025	28 days	1 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE WLNG DS 1	E235.F	02-Jan-2025	03-Jan-2025	28 days	1 days	✔	03-Jan-2025	28 days	1 days	✔	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG US 1	E235.F	02-Jan-2025	03-Jan-2025	28 days	1 days	✓	03-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG DS 1	E235.NO3-L	02-Jan-2025	03-Jan-2025	3 days	1 days	✓	03-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG US 1	E235.NO3-L	02-Jan-2025	03-Jan-2025	3 days	1 days	✓	03-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG DS 1	E235.NO2-L	02-Jan-2025	03-Jan-2025	3 days	1 days	✓	03-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG US 1	E235.NO2-L	02-Jan-2025	03-Jan-2025	3 days	1 days	✓	03-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE WLNG DS 1	E235.SO4	02-Jan-2025	03-Jan-2025	28 days	1 days	✓	03-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE WLNG US 1	E235.SO4	02-Jan-2025	03-Jan-2025	28 days	1 days	✓	03-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) WLNG DS 1	E366	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	05-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) WLNG US 1	E366	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	05-Jan-2025	28 days	3 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) W LNG DS 1	E372-U	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	07-Jan-2025	28 days	5 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) W LNG US 1	E372-U	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	07-Jan-2025	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) W LNG DS 1	E509	02-Jan-2025	09-Jan-2025	28 days	7 days	✓	09-Jan-2025	28 days	7 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) W LNG US 1	E509	02-Jan-2025	09-Jan-2025	28 days	7 days	✓	09-Jan-2025	28 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) W LNG DS 1	E421	02-Jan-2025	07-Jan-2025	180 days	5 days	✓	09-Jan-2025	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) W LNG US 1	E421	02-Jan-2025	07-Jan-2025	180 days	5 days	✓	09-Jan-2025	180 days	7 days	✓
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial dissolved (hydrochloric acid) W LNG DS 1	EF001	02-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial dissolved (hydrochloric acid) W LNG US 1	EF001	02-Jan-2025	----	----	----		03-Jan-2025	----	1 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) W LNG DS 1	E358-L	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	04-Jan-2025	28 days	2 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WLNG US 1	E358-L	02-Jan-2025	04-Jan-2025	28 days	2 days	✓	04-Jan-2025	28 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG DS 1	E290	02-Jan-2025	03-Jan-2025	14 days	1 days	✓	03-Jan-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG US 1	E290	02-Jan-2025	03-Jan-2025	14 days	1 days	✓	03-Jan-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG DS 1	E162	02-Jan-2025	----	----	----		06-Jan-2025	7 days	4 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG US 1	E162	02-Jan-2025	----	----	----		06-Jan-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG DS 1	E160	02-Jan-2025	----	----	----		06-Jan-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG US 1	E160	02-Jan-2025	----	----	----		06-Jan-2025	7 days	4 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG DS 1	E532	02-Jan-2025	----	----	----		04-Jan-2025	28 days	2 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG US 1	E532	02-Jan-2025	----	----	----		04-Jan-2025	28 days	2 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG DS 1	E508	02-Jan-2025	09-Jan-2025	28 days	7 days	✔	09-Jan-2025	28 days	7 days	✔
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG US 1	E508	02-Jan-2025	09-Jan-2025	28 days	7 days	✔	09-Jan-2025	28 days	7 days	✔
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG DS 1	E420	02-Jan-2025	07-Jan-2025	180 days	5 days	✔	09-Jan-2025	180 days	7 days	✔
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG US 1	E420	02-Jan-2025	07-Jan-2025	180 days	5 days	✔	09-Jan-2025	180 days	7 days	✔
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG DS 1	E395	02-Jan-2025	----	----	----		06-Jan-2025	7 days	4 days	✔
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG US 1	E395	02-Jan-2025	----	----	----		06-Jan-2025	7 days	4 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	
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1829113	1	18	5.5	5.0	✔
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✔
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✔
TDS by Gravimetry	E162	1830479	1	8	12.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
TSS by Gravimetry	E160	1830476	1	17	5.8	5.0	✔
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1829113	1	18	5.5	5.0	✔
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✔
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✔
TDS by Gravimetry	E162	1830479	1	8	12.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	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
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
TSS by Gravimetry	E160	1830476	1	17	5.8	5.0	✔
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1829113	1	18	5.5	5.0	✔
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✔
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✔
TDS by Gravimetry	E162	1830479	1	8	12.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	1	9	11.1	5.0	✔
TSS by Gravimetry	E160	1830476	1	17	5.8	5.0	✔
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1829972	1	16	6.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1829117	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1829116	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1834048	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1830436	1	20	5.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1829973	1	15	6.6	5.0	✔
Fluoride in Water by IC	E235.F	1829115	1	18	5.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1829118	1	20	5.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1829119	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1829120	1	18	5.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1829684	1	11	9.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1834290	1	10	10.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1830423	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1829970	1	17	5.8	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1829971	1	18	5.5	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>							
Matrix Spikes (MS) - Continued							
Total Sulfide by Colourimetry (Automated Flow)	E395	1830800	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 ₂ . 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 ₂ S" if reported represent the maximum possible H ₂ S concentration based on the total sulfide concentration in the sample. The H ₂ S calculation converts Total Sulphide as (S ₂ ⁻) and reports it as Total Sulphide as (H ₂ 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 ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO ₃), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. 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 ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ ,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl ₂ ,ClO ₂ ,ORP,DO, Turbidity,T,T-P,o-PO ₄ ,NH ₃ 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 ₃ .
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 : **VA25A0059**

Page : 1 of 17

Client : [REDACTED]
 Contact : [REDACTED]
 Address : [REDACTED]
 Telephone : [REDACTED]
 Project : [REDACTED]
 PO : [REDACTED]
 C-O-C number : [REDACTED]
 Sampler : [REDACTED]
 Site : Water Analysis
 Quote number : VA23-TRIT100-012_V2
 No. of samples received : 2
 No. of samples analysed : 2

Laboratory : [REDACTED]
 Account Manager : [REDACTED]
 Address : [REDACTED]
 Telephone : [REDACTED]
 Date Samples Received : 02-Jan-2025 14:20
 Date Analysis Commenced : 03-Jan-2025
 Issue Date : 10-Jan-2025 09:07

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

Page : 2 of 17
Work Order : VA25A0059
Client : Triton Environmental Consultants Ltd.
Project : 11964



General Comments

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

Key :

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

Workorder Comments

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1829113)											
VA24D4448-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	152	153	0.523%	20%	----
Physical Tests (QC Lot: 1830476)											
VA25A0105-002	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	45.4	49.4	8.44%	20%	----
Physical Tests (QC Lot: 1830479)											
KS2500012-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	154	148	5	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829115)											
VA24D4448-001	Anonymous	Fluoride	16984-48-8	E235.F	0.334	mg/L	<0.334	<0.334	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829116)											
VA24D4448-001	Anonymous	Chloride	16887-00-6	E235.Cl	2.50	mg/L	41.9	40.8	2.72%	20%	----
Anions and Nutrients (QC Lot: 1829117)											
VA24D4448-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.250	mg/L	<0.250	<0.250	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1829118)											
VA24D4448-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0250	mg/L	31.1	30.4	2.52%	20%	----
Anions and Nutrients (QC Lot: 1829119)											
VA24D4448-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0050	mg/L	1.52	1.50	1.48%	20%	----
Anions and Nutrients (QC Lot: 1829120)											
VA24D4448-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	166	162	2.87%	20%	----
Anions and Nutrients (QC Lot: 1829970)											
FJ2500001-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.300	mg/L	12.2	12.0	1.51%	20%	----
Anions and Nutrients (QC Lot: 1829971)											
FJ2500001-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0400	mg/L	5.86	5.93	1.31%	20%	----
Anions and Nutrients (QC Lot: 1829972)											
FJ2500001-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.500	mg/L	10.4	10.5	0.832%	20%	----
Organic / Inorganic Carbon (QC Lot: 1829973)											
VA25A0056-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Total Sulfides (QC Lot: 1830800)											
TY2500054-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0257	0.0247	4.09%	20%	----
Total Metals (QC Lot: 1830423)											
VA25A0056-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0361	0.0382	5.87%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00076	0.00074	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
Total Metals (QC Lot: 1830423) - continued											
VA25A0056-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00135	0.00128	4.88%	20%	---
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.00394	0.00399	1.41%	20%	---
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	---
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Boron, total	7440-42-8	E420	0.010	mg/L	0.015	0.015	0.0002	Diff <2x LOR	---
		Cadmium, total	7440-43-9	E420	0.0000100	mg/L	<0.0000100	<0.0000100	0	Diff <2x LOR	---
		Calcium, total	7440-70-2	E420	0.050	mg/L	22.7	21.7	4.67%	20%	---
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000021	0.000019	0.000002	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	<0.00010	<0.00010	0	Diff <2x LOR	---
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00078	0.00076	0.00001	Diff <2x LOR	---
		Iron, total	7439-89-6	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	---
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000212	0.000212	0.0000004	Diff <2x LOR	---
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0055	0.0055	0.00004	Diff <2x LOR	---
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.03	1.03	0.243%	20%	---
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00489	0.00492	0.539%	20%	---
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.0209	0.0209	0.137%	20%	---
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	---
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	---
		Potassium, total	7440-09-7	E420	0.050	mg/L	1.80	1.81	0.474%	20%	---
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00296	0.00293	0.852%	20%	---
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000065	0.000074	0.000009	Diff <2x LOR	---
		Silicon, total	7440-21-3	E420	0.10	mg/L	6.34	6.19	2.38%	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	5.08	5.20	2.49%	20%	---
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0454	0.0441	3.01%	20%	---
		Sulfur, total	7704-34-9	E420	0.50	mg/L	2.18	2.11	0.07	Diff <2x LOR	---
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000013	0.000011	0.000001	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	0.00077	0.00076	0.000008	Diff <2x LOR	---
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00363	0.00361	0.424%	20%	---



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1830423) - continued											
VA25A0056-001	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	0.0233	0.0226	0.0007	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1834290)											
KS2405395-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	0.0000125	0.0000154	0.0000029	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1830436)											
FJ2500013-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.128	0.130	1.87%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00050	0.00049	0.000003	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00060	0.00057	0.00002	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0748	0.0781	4.24%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.104	0.099	5.20%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.000250	0.000263	5.23%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	66.8	65.3	2.30%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	0.000010	0.0000005	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	0.0119	0.0124	4.33%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00068	0.00071	0.00004	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	0.0569	0.0544	4.62%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	23.4	25.0	6.71%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.244	0.251	2.94%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00515	0.00512	0.441%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0387	0.0399	3.16%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	2.82	3.00	6.31%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00289	0.00311	7.16%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000686	0.000736	6.99%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.10	3.00	3.42%	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	131	133	1.66%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.347	0.340	2.04%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1830436) - continued											
FJ2500013-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	118	114	3.17%	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	0.000012	0.000012	0.0000004	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	0.00031	0.00029	0.00002	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00190	0.00189	0.792%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	0.00076	0.00076	0.000004	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0167	0.0171	1.95%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1834048)											
VA25A0056-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1829684)											
VA25A0056-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----



Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1829113)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1830476)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1830479)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1829115)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1829116)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1829117)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1829118)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1829119)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1829120)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1829970)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1829971)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1829972)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 1829973)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1830800)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1830423)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1830423) - continued						
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1834290)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1830436)						
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>
Dissolved Metals (QCLot: 1830436) - continued						
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1834048)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1829684)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----



Laboratory Control Sample (LCS) Report

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

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1829113)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	106	85.0	115	----
Physical Tests (QCLot: 1830476)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	96.7	85.0	115	----
Physical Tests (QCLot: 1830479)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	93.4	85.0	115	----
Anions and Nutrients (QCLot: 1829115)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1829116)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1829117)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	105	85.0	115	----
Anions and Nutrients (QCLot: 1829118)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1829119)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1829120)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 1829970)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1829971)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	95.1	80.0	120	----
Anions and Nutrients (QCLot: 1829972)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	92.7	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1829973)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	98.6	80.0	120	----
Total Sulfides (QCLot: 1830800)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	103	80.0	120	----
Total Metals (QCLot: 1830423)									



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830423) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	100	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	100.0	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	98.5	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	97.8	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	102	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	98.7	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	97.7	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	95.5	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	95.4	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	98.8	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	94.3	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	99.0	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	95.5	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.7	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	99.2	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	99.8	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	100	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	100	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	110	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	87.7	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	99.5	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	92.5	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	100	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	94.6	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	98.1	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	95.1	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	98.6	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	96.8	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	97.6	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1830423) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	94.5	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	92.1	80.0	120	----
Total Metals (QCLot: 1834290)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	83.2	80.0	120	----
Dissolved Metals (QCLot: 1830436)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	97.5	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	104	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	98.1	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	96.9	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	96.2	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	99.3	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	97.7	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	98.6	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	98.9	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	97.4	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	93.9	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	96.9	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	106	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	98.8	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	103	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	96.0	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	104	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	96.8	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	98.0	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	106	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	90.2	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	106	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	104	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	96.7	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1830436) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	98.3	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	102	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	82.4	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	102	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	99.8	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	99.1	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	99.9	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	99.8	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	99.2	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	81.5	80.0	120	----
Speciated Metals (QCLot: 1829684)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	99.4	80.0	120	----



Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1829115)										
VA24D4448-002	Anonymous	Fluoride	16984-48-8	E235.F	4.94 mg/L	5 mg/L	98.7	75.0	125	----
Anions and Nutrients (QCLot: 1829116)										
VA24D4448-002	Anonymous	Chloride	16887-00-6	E235.Cl	504 mg/L	500 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1829117)										
VA24D4448-002	Anonymous	Bromide	24959-67-9	E235.Br-L	2.61 mg/L	2.5 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1829118)										
VA24D4448-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1829119)										
VA24D4448-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.51 mg/L	2.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1829120)										
VA24D4448-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	501 mg/L	500 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1829970)										
KS2405390-001	Anonymous	Nitrogen, total	7727-37-9	E366	1.84 mg/L	2 mg/L	92.2	70.0	130	----
Anions and Nutrients (QCLot: 1829971)										
KS2405389-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1829972)										
VA25A0056-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.104 mg/L	0.1 mg/L	104	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1829973)										
VA25A0056-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	5.28 mg/L	5 mg/L	106	70.0	130	----
Total Sulfides (QCLot: 1830800)										
TY2500054-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.222 mg/L	0.2 mg/L	111	75.0	125	----
Total Metals (QCLot: 1830423)										
VA25A0056-002	Anonymous	Aluminum, total	7429-90-5	E420	0.187 mg/L	0.2 mg/L	93.3	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0195 mg/L	0.02 mg/L	97.5	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Barium, total	7440-39-3	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0383 mg/L	0.04 mg/L	95.8	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0100 mg/L	0.01 mg/L	100	70.0	130	----
		Boron, total	7440-42-8	E420	0.096 mg/L	0.1 mg/L	96.5	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00403 mg/L	0.004 mg/L	101	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00985 mg/L	0.01 mg/L	98.5	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0402 mg/L	0.04 mg/L	100	70.0	130	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1830423) - continued										
VA25A0056-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Copper, total	7440-50-8	E420	0.0194 mg/L	0.02 mg/L	97.2	70.0	130	----
		Iron, total	7439-89-6	E420	1.98 mg/L	2 mg/L	98.8	70.0	130	----
		Lead, total	7439-92-1	E420	0.0203 mg/L	0.02 mg/L	101	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0938 mg/L	0.1 mg/L	93.8	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0194 mg/L	0.02 mg/L	97.0	70.0	130	----
		Molybdenum, total	7439-98-7	E420	ND mg/L	----	ND	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0395 mg/L	0.04 mg/L	98.8	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.38 mg/L	10 mg/L	93.8	70.0	130	----
		Potassium, total	7440-09-7	E420	3.80 mg/L	4 mg/L	95.0	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0411 mg/L	0.04 mg/L	103	70.0	130	----
		Silicon, total	7440-21-3	E420	9.43 mg/L	10 mg/L	94.3	70.0	130	----
		Silver, total	7440-22-4	E420	0.00383 mg/L	0.004 mg/L	95.8	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	19.8 mg/L	20 mg/L	99.2	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0409 mg/L	0.04 mg/L	102	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00399 mg/L	0.004 mg/L	99.8	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0190 mg/L	0.02 mg/L	95.0	70.0	130	----
		Tin, total	7440-31-5	E420	0.0203 mg/L	0.02 mg/L	102	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0389 mg/L	0.04 mg/L	97.3	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0205 mg/L	0.02 mg/L	102	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00408 mg/L	0.004 mg/L	102	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0990 mg/L	0.1 mg/L	99.0	70.0	130	----
		Zinc, total	7440-66-6	E420	0.398 mg/L	0.4 mg/L	99.5	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0414 mg/L	0.04 mg/L	104	70.0	130	----
Total Metals (QCLot: 1834290)										
KS2500003-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000905 mg/L	0 mg/L	90.5	70.0	130	----
Dissolved Metals (QCLot: 1830436)										
FJ2500013-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.198 mg/L	0.2 mg/L	99.2	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0246 mg/L	0.02 mg/L	123	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0476 mg/L	0.04 mg/L	119	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0113 mg/L	0.01 mg/L	113	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.135 mg/L	0.1 mg/L	135	70.0	130	MES
		Cadmium, dissolved	7440-43-9	E421	0.00385 mg/L	0.004 mg/L	96.4	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0115 mg/L	0.01 mg/L	115	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0401 mg/L	0.04 mg/L	100	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0194 mg/L	0.02 mg/L	97.1	70.0	130	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1830436) - continued										
FJ2500013-002	Anonymous	Copper, dissolved	7440-50-8	E421	0.0184 mg/L	0.02 mg/L	92.0	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.92 mg/L	2 mg/L	96.0	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0230 mg/L	0.02 mg/L	115	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.124 mg/L	0.1 mg/L	124	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	0.0268 mg/L	0.02 mg/L	134	70.0	130	MES
		Nickel, dissolved	7440-02-0	E421	0.0380 mg/L	0.04 mg/L	95.1	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.6 mg/L	10 mg/L	106	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	4.17 mg/L	4 mg/L	104	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0194 mg/L	0.02 mg/L	96.9	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0448 mg/L	0.04 mg/L	112	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	10.8 mg/L	10 mg/L	108	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00340 mg/L	0.004 mg/L	85.1	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0486 mg/L	0.04 mg/L	122	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00457 mg/L	0.004 mg/L	114	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0151 mg/L	0.02 mg/L	75.5	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0406 mg/L	0.04 mg/L	101	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0245 mg/L	0.02 mg/L	123	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00520 mg/L	0.004 mg/L	130	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.376 mg/L	0.4 mg/L	94.1	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0514 mg/L	0.04 mg/L	128	70.0	130	----
Dissolved Metals (QCLot: 1834048)										
VA25A0056-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000799 mg/L	0 mg/L	79.9	70.0	130	----
Speciated Metals (QCLot: 1829684)										
VA25A0056-002	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.263 mg/L	0.25 mg/L	105	70.0	130	----

Qualifiers

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



ALS Environmental

www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here

(lab use only)

COC Number: 17 -

Page 1 of

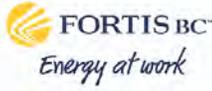
Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																																																																																																																																																																																																																																																																																														
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Environmental Division
Vancouver
Work Order Reference
VA25A0059

Telephone: +1 604 253 4188

 Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report	Reporting Week	Dec 30 th to Jan 5 th , 2025
	Report #	41
	Appendix D	D-4

Woodfibre Site Receiving Environment Field Notes and Logs



FortisBC Eagle Mountain-Woodfibre Gas Pipeline
Water Discharge Authorization Water Quality Monitoring

2025-1-2-Chycoski-9152B

Project Component:	Tunnel	Site Name:	Receiving Environment - Downstream of Discharge
Inspection Date:	01/02/2025	Location:	WLNG
Triton QP:	Lily Chycoski	Latitude/Longitude:	49.669155 -123.248257
Temperature(c): Low 1 High 3		Permit:	PE 110136
Weather Conditions:	Overcast	Ground Conditions:	Damp

Observations

Time: 09:55:00 **Flow Volume (visual):** moderate

Notes:

Odour Detected?: No **Notes:**

Unusual Colour?: No **Notes:**

Unusual Observations?: No **Notes:**

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

Samples Collected - Parameters

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

Logger Maintenance

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

Photos



Photo: 1
Location: EAS DS 1
Description: US view



Photo: 2
Location: EAS DS 1
Description: Across view

Photos



Photo: 3
Location: EAS DS 1
Description: DS view

ALS Receipt #	Sample Description	Matrix	Time	Temp	Sample Type	Analysis
7.68	20µs/cm	Water	02-20-25	9:30	Water	...
7.9	64µs/cm	Water	02-20-25	9:55	Water	...

Photo: 4
Location: COC
Description: Lab COC



2025-1-2-Chycoski-9152B

Sign Off

Report Prepared By: Lily Chycoski

Report Reviewed: Yes

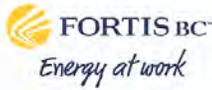
Report Reviewer:

Professional(s) of Record:

Name:

Designation:

Designation Number:



FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-2-Chycoski-D0088

Project Component:	Tunnel	Site Name:	Receiving Environment - Upstream of Discharge
Inspection Date:	01/02/2025	Location:	WLNG
Triton QP:	Lily Chycoski	Latitude/Longitude:	49.669455 -123.25087
Temperature(c): Low 1 High 3		Permit:	PE 110136
Weather Conditions:	Overcast	Ground Conditions:	Damp

Observations

Time: 09:30:00 **Flow Volume (visual):** moderate

Notes:

Odour Detected?: No **Notes:**

Unusual Colour?: No **Notes:**

Unusual Observations?: No **Notes:**

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

Samples Collected - Parameters

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

Logger Maintenance

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

Photos



Photo: 1
Location: EAS US 1
Description: US view



Photo: 2
Location: EAS US 1
Description: Across view

Photos



Photo: 3
Location: EAS US 1
Description: DS view

ALS Receipt #	Sample Identification (Client's Code)	Container	Date	Time	Sample Type	Method	Result	Unit	Notes
7.68	21 µs/cm	Water	02-20-25	9:30	Water	21 µs/cm	5.7	°C	
7.9	64 µs/cm	Water	02-20-25	9:55	Water	64 µs/cm	6.4	°C	

Photo: 4
Location: EAS US 1
Description: Lab COC



Sign Off

Report Prepared By: Lily Chycoski

Report Reviewed: Yes

Report Reviewer:

Professional(s) of Record:

Name:

Designation:

Designation Number:

Date	EAS Downstream (DS)						EAS Upstream (US)							Date	EAS Upstream (US)					
	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temperature (c)		Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	
12/30/2024 0:00	19.0	0.0	6.8	15.3	0.4	12/30/2024 0:00	6.4	14.4	0.0	7.0	11.2	1.1	9.1	30						
12/30/2024 0:15	18.9	0.0	6.8	15.3	0.9	12/30/2024 0:15	6.3	14.6	0.0	7.0	11.2	0.2	8.2	25						
12/30/2024 0:30	18.8	0.0	6.8	15.3	0.5	12/30/2024 0:30	6.3	14.0	0.0	7.0	11.2	0.1	8.1	20						
12/30/2024 0:45	17.7	0.0	6.8	15.3	0.5	12/30/2024 0:45	6.0	14.3	0.0	6.9	11.2	0.2	8.2	15						
12/30/2024 1:00	18.6	0.0	6.8	15.3	0.8	12/30/2024 1:00	6.3	13.8	0.0	6.9	11.2	0.1	8.1	10						
12/30/2024 1:15	35.8	0.0	7.3	15.1	0.6	12/30/2024 1:15	6.3	14.1	0.0	6.9	11.2	0.3	8.3	5						
12/30/2024 1:30	36.2	0.0	7.3	15.1	1.1	12/30/2024 1:30	6.4	13.8	0.0	6.9	11.2	1.2	9.2	0						
12/30/2024 1:45	36.3	0.0	7.3	15.1	0.7	12/30/2024 1:45	6.4	13.9	0.0	6.9	11.2	0.2	8.2							
12/30/2024 2:00	26.4	0.0	7.3	15.2	0.6	12/30/2024 2:00	6.4	13.8	0.0	7.0	11.2	0.2	8.2							
12/30/2024 2:15	18.5	0.0	6.9	15.3	0.7	12/30/2024 2:15	6.4	13.8	0.0	7.0	11.2	0.3	8.3							
12/30/2024 2:30	18.5	0.0	6.8	15.3	0.5	12/30/2024 2:30	6.4	13.9	0.0	6.9	11.2	0.3	8.3							
12/30/2024 2:45	19.6	0.0	6.8	15.3	0.1	12/30/2024 2:45	6.4	14.2	0.0	7.0	11.2	0.6	8.6							
12/30/2024 3:00	18.8	0.0	6.9	15.3	0.6	12/30/2024 3:00	6.4	14.3	0.0	7.0	11.2	1.0	9.0							
12/30/2024 3:15	18.9	0.0	6.8	15.3	0.6	12/30/2024 3:15	6.4	14.6	0.0	6.9	11.2	1.3	9.3							
12/30/2024 3:30	18.9	0.0	6.8	15.3	0.6	12/30/2024 3:30	6.4	14.3	0.0	7.0	11.2	0.6	8.6							
12/30/2024 3:45	18.7	0.0	6.8	15.3	1.3	12/30/2024 3:45	6.4	14.2	0.0	6.9	11.2	0.3	8.3							
12/30/2024 4:00	18.5	0.0	6.9	15.3	0.5	12/30/2024 4:00	6.4	14.0	0.0	7.0	11.2	0.1	8.1							
12/30/2024 4:15	36.6	0.0	7.3	15.1	0.7	12/30/2024 4:15	6.4	13.9	0.0	7.0	11.2	0.1	8.1							
12/30/2024 4:30	36.9	0.0	7.3	15.1	0.7	12/30/2024 4:30	6.4	13.8	0.0	6.9	11.2	0.8	8.8							
12/30/2024 4:45	37.0	0.0	7.3	15.1	0.4	12/30/2024 4:45	6.4	13.9	0.0	7.0	11.2	0.1	8.1							
12/30/2024 5:00	20.1	0.0	7.0	15.3	1.0	12/30/2024 5:00	6.4	13.8	0.0	7.0	11.2	0.7	8.7							
12/30/2024 5:15	18.7	0.0	6.9	15.3	0.7	12/30/2024 5:15	6.4	14.0	0.0	7.0	11.2	2.5	10.5							
12/30/2024 5:30	18.5	0.0	6.8	15.3	1.1	12/30/2024 5:30	6.4	13.8	0.0	6.9	11.2	0.9	8.9							
12/30/2024 5:45	18.5	0.0	6.8	15.3	0.9	12/30/2024 5:45	6.4	13.9	0.0	6.9	11.2	0.9	8.9							
12/30/2024 6:00	18.4	0.0	6.8	15.3	0.7	12/30/2024 6:00	6.4	13.7	0.0	7.0	11.3	0.1	8.1							
12/30/2024 6:15	18.4	0.0	6.8	15.3	1.0	12/30/2024 6:15	6.4	13.8	0.0	6.9	11.2	0.0	8.0							
12/30/2024 6:30	18.3	0.0	6.8	15.4	0.6	12/30/2024 6:30	6.3	13.6	0.0	7.0	11.3	0.5	8.5							
12/30/2024 6:45	18.2	0.0	6.8	15.4	0.8	12/30/2024 6:45	6.3	13.7	0.0	6.9	11.3	0.8	8.8							
12/30/2024 7:00	18.3	0.0	6.8	15.3	1.1	12/30/2024 7:00	6.3	13.6	0.0	7.0	11.3	0.8	8.8							
12/30/2024 7:15	18.9	0.0	6.8	15.4	1.2	12/30/2024 7:15	6.3	14.6	0.0	7.0	11.3	0.1	8.1							
12/30/2024 7:30	37.6	0.0	7.3	15.2	0.7	12/30/2024 7:30	6.3	13.8	0.0	6.9	11.3	0.1	8.1							
12/30/2024 7:45	36.9	0.0	7.2	15.2	0.8	12/30/2024 7:45	6.3	16.7	0.0	6.9	11.3	2.8	10.8							
12/30/2024 8:00	37.6	0.0	7.3	15.2	0.9	12/30/2024 8:00	6.3	16.6	0.0	7.1	11.2	4.8	12.8							
12/30/2024 8:15	38.3	0.0	7.3	15.2	1.6	12/30/2024 8:15	6.3	17.5	0.0	7.0	11.3	0.7	8.7							
12/30/2024 8:30	38.7	0.0	7.3	15.2	2.2	12/30/2024 8:30	6.2	18.6	0.0	7.1	11.3	0.8	8.8							
12/30/2024 8:45	22.8	0.0	6.9	15.4	1.7	12/30/2024 8:45	6.2	18.8	0.0	7.1	11.3	0.5	8.5							
12/30/2024 9:00	24.0	0.0	6.9	15.4	2.0	12/30/2024 9:00	6.2	20.4	0.0	7.2	11.3	1.3	9.3							
12/30/2024 9:15	24.8	0.0	6.9	15.4	1.4	12/30/2024 9:15	6.2	21.0	0.0	7.1	11.3	1.2	9.2							
12/30/2024 9:30	25.0	0.0	6.9	15.4	1.2	12/30/2024 9:30	6.2	21.1	0.0	7.2	11.3	0.7	8.7							
12/30/2024 9:45	25.4	0.0	6.9	15.4	0.9	12/30/2024 9:45	6.2	21.8	0.0	7.2	11.3	2.7	10.7							
12/30/2024 10:00	25.5	0.0	6.9	15.4	1.0	12/30/2024 10:00	6.2	21.5	0.0	7.2	11.3	3.6	11.6							
12/30/2024 10:15	39.7	0.0	7.3	15.3	1.9	12/30/2024 10:15	6.2	21.4	0.0	7.2	11.3	0.8	8.8							
12/30/2024 10:30	39.4	0.0	7.3	15.3	1.1	12/30/2024 10:30	6.2	20.7	0.0	7.1	11.3	1.9	9.8							
12/30/2024 10:45	38.5	0.0	7.3	15.3	0.8	12/30/2024 10:45	6.2	20.4	0.0	7.2	11.3	0.4	8.4							
12/30/2024 11:00	38.7	0.0	7.3	15.3	1.4	12/30/2024 11:00	6.2	19.8	0.0	7.1	11.3	1.6	9.6							
12/30/2024 11:15	23.9	0.0	7.0	15.4	1.6	12/30/2024 11:15	6.3	18.5	0.0	7.1	11.3	0.2	8.2							
12/30/2024 11:30	23.1	0.0	6.8	15.4	2.2	12/30/2024 11:30	6.3	18.7	0.0	7.1	11.3	0.2	8.2							
12/30/2024 11:45	22.6	0.0	6.9	15.4	1.5	12/30/2024 11:45	6.3	18.4	0.0	7.1	11.3	0.2	8.2							
12/30/2024 12:00	22.2	0.0	6.9	15.4	0.8	12/30/2024 12:00	6.3	17.9	0.0	7.0	11.3	1.2	9.2							
12/30/2024 12:15	21.8	0.0	6.9	15.4	0.9	12/30/2024 12:15	6.3	17.7	0.0	7.0	11.3	0.6	8.6							
12/30/2024 12:30	21.5	0.0	6.9	15.4	1.9	12/30/2024 12:30	6.4	17.2	0.0	7.0	11.3	0.6	8.6							
12/30/2024 12:45	21.8	0.0	6.9	15.4	0.8	12/30/2024 12:45	6.4	17.9	0.0	7.1	11.3	0.6	8.6							
12/30/2024 13:00	35.9	0.0	7.1	15.3	0.8	12/30/2024 13:00	6.4	18.2	0.0	7.1	11.3	2.7	10.7							
12/30/2024 13:15	37.2	0.0	7.3	15.2	0.7	12/30/2024 13:15	6.4	18.6	0.0	7.1	11.3	0.8	8.8							
12/30/2024 13:30	37.2	0.0	7.3	15.2	0.6	12/30/2024 13:30	6.4	17.7	0.0	7.1	11.3	0.8	8.8							
12/30/2024 13:45	36.9	0.0	7.3	15.2	1.0	12/30/2024 13:45	6.5	17.8	0.0	7.1	11.3	2.1	10.1							
12/30/2024 14:00	24.0	0.0	7.1	15.3	0.9	12/30/2024 14:00	6.5	17.4	0.0	7.0	11.3	0.8	8.8							
12/30/2024 14:15	21.8	0.0	6.9	15.3	1.2	12/30/2024 14:15	6.5	17.5	0.0	7.1	11.3	0.7	8.7							
12/30/2024 14:30						12/30/2024 14:30	6.5	17.1	0.0	7.1	11.3	3.2	11.2							
12/30/2024 14:45						12/30/2024 14:45	6.5	17.0	0.0	7.1	11.3	0.3	8.3							
12/30/2024 15:00	6.9	0.0	6.9	11.4	3.5	12/30/2024 15:00	6.6	16.5	0.0	7.0	11.2	1.3	9.3							
12/30/2024 15:15	6.6	21.9	0.0	6.8	11.5	3.6	12/30/2024 15:15	6.6	16.5	0.0	7.0	11.2	1.6	9.6						
12/30/2024 15:30	6.5	20.8	0.0	6.8	11.5	3.6	12/30/2024 15:30	6.6	16.1	0.0	7.0	11.3	2.0	10.0						
12/30/2024 15:45						12/30/2024 15:45	6.6	16.0	0.0	7.1	11.3	1.5	9.5							
12/30/2024 16:00	6.5	20.4	0.0	6.6	11.5	7.4	12/30/2024 16:00	6.6	15.6	0.0	7.0	11.2	0.9	8.9						
12/30/2024 16:15						12/30/2024 16:15	6.6	15.8	0.0	7.0	11.2	2.1	10.1							
12/30/2024 16:30						12/30/2024 16:30	6.6	15.5	0.0	7.0	11.2	0.3	8.3							
12/30/2024 16:45						12/30/2024 16:45	6.6	15.4	0.0	7.0	11.2	0.4	8.4							
12/30/2024 17:00	6.5	20.0	0.0	6.6	11.5	4.9	12/30/2024 17:00	6.6	15.0	0.0	7.0	11.2	1.5	9.5						
12/30/2024 17:15						12/30/2024 17:15	6.6	15.5	0.0	7.0	11.3	0.2	8.2							
12/30/2024 17:30						12/30/2024 17:30	6.6	15.0	0.0	7.0	11.2	0.5	8.5							
12/30/2024 17:45						12/30/2024 17:45	6.5	15.0	0.0	7.0	11.3	0.5	8.5							
12/30/2024 18:00	6.8	37.4	0.0	7.0	11.4	3.7	12/30/2024 18:00	6.5	14.9	0.0	7.0	11.2	0.1	8.1						
12/30/2024 18:15						12/30/2024 18:15	6.5	14.9	0.0	6.9	11.3	0.1	8.1							
12/30/2024 18:30						12/30/2024 18:30	6.4	14.7	0.0	7.0	11.3	1.3	9.3							
12/30/2024 18:45						12/30/2024 18:45	6.4	14.8	0.0	7.0	11.3	0.1	8.1							
12/30/2024 19:00						12/30/2024 19:00	6.4	14.3	0.0	7.0	11.3	0.3	8.3							
12/30/2024 19:15	6.3	19.1	0.0	6.5	11.6	3.4	12/30/2024 19:15	6.3	14.6	0.0	7.0	11.3	0.3	8.3						
12/30/2024 19:30						12/30/2024 19:30	6.3	14.3	0.0	7.0	11.3	0.1	8.1							
12/30/2024 19:45						12/30/2024 19:45	6.3	14.4	0.0	7.0	11.3	0.1	8.1							
12/30/2024 20:00	6.2	19.3	0.0	6.6	11.6	3.5	12/30/2024 20:00	6.2	14.2	0.0	7.0	11.3	0.1	8.1						
12/30/2024 20:15						12/30/2024 20:15	6.2	14.2	0.0	7.0	11.3	0.2	8.2							
12/30/2024 20:30																				

12/31/2024 1300	6.6	41.0	0.0	7.0	11.5	4.1	12/31/2024 1300	6.2	12.4	0.0	7.0	11.3	0.5	8.5
12/31/2024 1315							12/31/2024 1315	6.2	11.3	0.0	6.9	11.3	0.8	8.8
12/31/2024 1330							12/31/2024 1330	6.2	12.4	0.0	7.0	11.3	1.0	8.9
12/31/2024 1345							12/31/2024 1345	6.3	11.1	0.0	7.0	11.3	0.9	8.9
12/31/2024 1400							12/31/2024 1400	6.3	12.3	0.0	6.9	11.3	0.8	8.8
12/31/2024 1415	6.1	17.1	0.0	6.5	11.6	3.7	12/31/2024 1415	6.3	12.3	0.0	6.9	11.3	0.7	8.7
12/31/2024 1430							12/31/2024 1430	6.3	11.2	0.0	6.9	11.3	0.8	8.7
12/31/2024 1445							12/31/2024 1445	6.3	12.4	0.0	6.9	11.3	0.5	8.5
12/31/2024 1500	6.5	28.8	0.0	7.0	11.4	3.6	12/31/2024 1500	6.3	12.4	0.0	7.0	11.3	0.5	8.5
12/31/2024 1515							12/31/2024 1515	6.3	11.2	0.0	6.9	11.3	1.1	9.1
12/31/2024 1530							12/31/2024 1530	6.3	12.3	0.0	7.0	11.3	0.6	8.6
12/31/2024 1545							12/31/2024 1545	6.3	11.1	0.0	6.9	11.3	0.5	8.5
12/31/2024 1600	6.5	36.5	0.0	6.7	11.5	3.7	12/31/2024 1600	6.3	12.3	0.0	6.9	11.3	1.7	9.7
12/31/2024 1615							12/31/2024 1615	6.3	11.1	0.0	7.0	11.3	1.0	9.0
12/31/2024 1630							12/31/2024 1630	6.3	12.2	0.0	6.9	11.3	0.8	8.8
12/31/2024 1645							12/31/2024 1645	6.2	11.1	0.0	6.9	11.3	0.5	8.5
12/31/2024 1700	6.1	17.2	0.0	6.5	11.6	3.5	12/31/2024 1700	6.2	12.3	0.0	7.0	11.3	0.5	8.5
12/31/2024 1715							12/31/2024 1715	6.2	11.1	0.0	7.0	11.3	1.2	9.2
12/31/2024 1730							12/31/2024 1730	6.2	12.2	0.0	7.0	11.3	1.8	9.8
12/31/2024 1745							12/31/2024 1745	6.1	11.0	0.0	6.9	11.3	0.6	8.6
12/31/2024 1800	6.6	43.1	0.0	7.1	11.4	4.4	12/31/2024 1800	6.1	12.3	0.0	6.9	11.3	0.6	8.6
12/31/2024 1815							12/31/2024 1815	6.1	12.2	0.0	6.8	11.3	0.5	8.5
12/31/2024 1830							12/31/2024 1830	6.1	12.2	0.0	7.0	11.3	0.4	8.4
12/31/2024 1845							12/31/2024 1845	6.1	11.1	0.0	6.9	11.3	0.4	8.4
12/31/2024 1900	5.9	17.1	0.0	6.5	11.6	5.0	12/31/2024 1900	6.0	12.2	0.0	6.9	11.3	0.4	8.4
12/31/2024 1915							12/31/2024 1915	6.0	12.3	0.0	7.0	11.3	0.4	8.4
12/31/2024 1930							12/31/2024 1930	6.0	12.3	0.0	7.0	11.3	0.4	8.4
12/31/2024 1945							12/31/2024 1945	6.0	12.1	0.0	6.9	11.3	0.4	8.4
12/31/2024 2000	6.4	44.5	0.0	7.0	11.4	5.3	12/31/2024 2000	6.0	12.3	0.0	6.9	11.3	0.7	8.7
12/31/2024 2015							12/31/2024 2015	6.0	12.2	0.0	7.0	11.3	1.4	9.4
12/31/2024 2030							12/31/2024 2030	5.9	11.1	0.0	7.0	11.4	0.4	8.4
12/31/2024 2045							12/31/2024 2045	5.9	12.2	0.0	7.0	11.3	0.4	8.4
12/31/2024 2100	5.8	17.2	0.0	6.5	11.7	3.5	12/31/2024 2100	5.9	11.1	0.0	6.9	11.3	1.0	9.0
12/31/2024 2115							12/31/2024 2115	5.8	12.2	0.0	6.8	11.4	0.4	8.4
12/31/2024 2130							12/31/2024 2130	5.9	11.0	0.0	7.0	11.3	1.2	9.2
12/31/2024 2145							12/31/2024 2145	5.9	12.2	0.0	7.0	11.4	1.3	9.3
12/31/2024 2200	6.3	38.4	0.0	7.1	11.4	4.4	12/31/2024 2200	5.8	12.3	0.0	6.9	11.3	0.5	8.5
12/31/2024 2215							12/31/2024 2215	5.8	12.2	0.0	7.0	11.4	0.4	8.4
12/31/2024 2230							12/31/2024 2230	5.8	11.0	0.0	6.9	11.4	0.7	8.7
12/31/2024 2245							12/31/2024 2245	5.8	12.3	0.0	6.9	11.4	1.1	9.1
12/31/2024 2300	5.6	17.0	0.0	6.5	11.7	7.1	12/31/2024 2300	5.8	12.2	0.0	6.9	11.4	0.8	8.8
12/31/2024 2315							12/31/2024 2315	5.8	12.2	0.0	6.9	11.4	1.1	9.1
12/31/2024 2330							12/31/2024 2330	5.8	12.3	0.0	6.9	11.4	0.5	8.5
12/31/2024 2345							12/31/2024 2345	5.8	12.2	0.0	6.9	11.4	0.7	8.7
1/01/2025 0000	5.6	17.2	0.0	6.5	11.7	3.1	1/01/2025 0000	5.8	12.2	0.0	6.9	11.4	0.8	8.8
1/01/2025 0115							1/01/2025 0115	5.8	12.1	0.0	6.9	11.4	0.4	8.4
1/01/2025 0300							1/01/2025 0300	5.8	12.2	0.0	7.0	11.4	1.1	9.1
1/01/2025 0445							1/01/2025 0445	5.8	12.1	0.0	6.9	11.4	0.4	8.4
1/01/2025 1000	6.3	43.6	0.0	7.0	11.5	4.9	1/01/2025 1000	5.8	10.9	0.0	6.9	11.4	0.8	8.8
1/01/2025 1115							1/01/2025 1115	5.8	12.1	0.0	6.9	11.4	0.4	8.4
1/01/2025 1300							1/01/2025 1300	5.8	12.2	0.0	7.0	11.4	0.4	8.4
1/01/2025 1445							1/01/2025 1445	5.8	12.1	0.0	6.8	11.4	0.6	8.6
1/01/2025 2000	6.3	46.5	0.0	7.1	11.5	4.4	1/01/2025 2000	5.8	12.2	0.0	7.0	11.4	0.8	8.8
1/01/2025 2115							1/01/2025 2115	5.7	12.1	0.0	7.0	11.4	3.5	11.5
1/01/2025 2300							1/01/2025 2300	5.7	12.2	0.0	7.0	11.4	0.6	8.6
1/01/2025 2445							1/01/2025 2445	5.7	12.1	0.0	6.9	11.4	0.5	8.5
1/01/2025 3000	5.5	17.0	0.0	6.5	11.7	3.8	1/01/2025 3000	5.7	10.9	0.0	6.9	11.4	1.0	9.0
1/01/2025 3115							1/01/2025 3115	5.7	12.0	0.0	6.9	11.4	0.5	8.5
1/01/2025 3300							1/01/2025 3300	5.7	12.0	0.0	6.9	11.4	0.5	8.5
1/01/2025 3445							1/01/2025 3445	5.7	12.1	0.0	7.0	11.4	0.4	8.4
1/01/2025 4000	6.0	36.3	0.0	7.0	11.6	3.4	1/01/2025 4000	5.7	11.9	0.0	6.9	11.4	2.7	10.7
1/01/2025 4115							1/01/2025 4115	5.7	10.7	0.0	6.9	11.4	0.4	8.4
1/01/2025 4300							1/01/2025 4300	5.7	12.0	0.0	6.8	11.4	0.4	8.4
1/01/2025 4445							1/01/2025 4445	5.7	10.9	0.0	7.0	11.4	0.9	8.9
1/01/2025 5000	6.1	47.4	0.0	7.1	11.5	3.4	1/01/2025 5000	5.6	12.0	0.0	6.9	11.4	0.5	8.5
1/01/2025 5115							1/01/2025 5115	5.6	10.9	0.0	6.9	11.4	0.7	8.7
1/01/2025 5300							1/01/2025 5300	5.6	12.1	0.0	7.0	11.4	1.1	9.1
1/01/2025 5445							1/01/2025 5445	5.6	10.8	0.0	6.9	11.4	1.0	9.0
1/01/2025 6000	6.1	47.4	0.0	7.1	11.5	3.9	1/01/2025 6000	5.6	11.9	0.0	6.9	11.4	0.4	8.4
1/01/2025 6115							1/01/2025 6115	5.6	10.8	0.0	6.8	11.4	0.4	8.4
1/01/2025 6300							1/01/2025 6300	5.6	11.9	0.0	6.8	11.4	0.4	8.4
1/01/2025 6445							1/01/2025 6445	5.6	12.0	0.0	6.9	11.4	0.6	8.6
1/01/2025 7000	5.4	16.9	0.0	6.5	11.8	3.8	1/01/2025 7000	5.6	11.9	0.0	6.9	11.4	0.4	8.4
1/01/2025 7115							1/01/2025 7115	5.6	12.0	0.0	7.0	11.4	1.3	9.3
1/01/2025 7300							1/01/2025 7300	5.6	11.8	0.0	6.9	11.4	0.4	8.4
1/01/2025 7445							1/01/2025 7445	5.6	10.7	0.0	6.9	11.4	0.5	8.5
1/01/2025 8000	5.4	17.2	0.0	6.6	11.8	3.5	1/01/2025 8000	5.6	12.0	0.0	6.9	11.4	0.4	8.4
1/01/2025 8115							1/01/2025 8115	5.5	11.9	0.0	6.9	11.4	0.4	8.4
1/01/2025 8300							1/01/2025 8300	5.5	11.9	0.0	6.9	11.4	0.4	8.4
1/01/2025 8445							1/01/2025 8445	5.5	11.7	0.0	6.9	11.4	0.4	8.4
1/01/2025 9000	6.1	46.9	0.0	7.1	11.6	3.3	1/01/2025 9000	5.5	10.8	0.0	7.0	11.5	0.4	8.4
1/01/2025 9115							1/01/2025 9115	5.5	11.9	0.0	6.8	11.4	0.4	8.4
1/01/2025 9300							1/01/2025 9300	5.5	11.9	0.0	6.9	11.5	1.6	9.6
1/01/2025 9445							1/01/2025 9445	5.5	11.9	0.0	6.9	11.5	0.4	8.4
1/01/2025 10000	5.9	43.6	0.0	6.8	11.7	3.3	1/01/2025 10000	5.5	10.7	0.0	7.0	11.5	0.6	8.6
1/01/2025 10115							1/01/2025 10115	5.5	10.7	0.0	6.9	11.5	0.4	8.4
1/01/2025 10300							1/01/2025 10300	5.5	10.6	0.0	7.0	11.5	0.5	8.5
1/01/2025 10445							1/01/2025 10445	5.5	11.8	0.0	6.9	11.5	0.4	8.4
1/01/2025 11000	5.3	16.9	0.0	6.5	11.8	3.6	1/01/2025 11000	5.5	11.9	0.0	7.0	11.5	0.4	8.4
1/01/2025 11115							1/01/2025 11115	5.6	11.8	0.0	6.9	11.5	0.4	8.4
1/01/2025 11300							1/01/2025 11300	5.6	10.7	0.0	6.9	11.5	0.4	8.4
1/01/2025 11445							1/01/2025 11445	5.6	11.8	0.0	6.9	11.4	0.3	8.3
1/01/2025 12000	5.4	17.2	0.0	6.6	11.8	3.2	1/01/2025 12000	5.6	11.7	0.0	6.9	11.4	0.4	

1/02/2025 3:15								1/02/2025 3:15	5.1	10.4	0.0	7.0	11.6	0.3	8.3
1/02/2025 3:30								1/02/2025 3:30	5.2	11.5	0.0	6.9	11.6	0.4	8.4
1/02/2025 3:45								1/02/2025 3:45	5.2	10.4	0.0	6.9	11.6	0.5	8.5
1/02/2025 4:00	5.7	49.2	0.0	6.9	11.7	3.9		1/02/2025 4:00	5.2	11.5	0.0	6.9	11.6	0.3	8.3
1/02/2025 4:15								1/02/2025 4:15	5.2	10.4	0.0	6.9	11.5	0.3	8.3
1/02/2025 4:30								1/02/2025 4:30	5.2	11.5	0.0	6.9	11.6	0.3	8.3
1/02/2025 4:45								1/02/2025 4:45	5.2	11.5	0.0	6.9	11.6	0.4	8.4
1/02/2025 5:00	5.0	17.1	0.0	6.6	11.9	3.3		1/02/2025 5:00	5.2	11.6	0.0	6.9	11.5	0.4	8.4
1/02/2025 5:15								1/02/2025 5:15	5.2	10.4	0.0	6.9	11.6	0.4	8.4
1/02/2025 5:30								1/02/2025 5:30	5.2	11.5	0.0	6.9	11.5	0.3	8.3
1/02/2025 5:45								1/02/2025 5:45	5.2	11.4	0.0	6.9	11.5	0.4	8.4
1/02/2025 6:00	5.9	54.1	0.0	7.1	11.6	3.3		1/02/2025 6:00	5.2	10.4	0.0	7.0	11.5	0.3	8.3
1/02/2025 6:15								1/02/2025 6:15	5.2	11.5	0.0	6.8	11.5	0.4	8.4
1/02/2025 6:30								1/02/2025 6:30	5.2	11.3	0.0	7.0	11.5	0.6	8.6
1/02/2025 6:45								1/02/2025 6:45	5.2	10.4	0.0	6.9	11.5	0.3	8.3
1/02/2025 7:00	5.0	16.8	0.0	6.5	11.9	3.1		1/02/2025 7:00	5.2	11.5	0.0	6.9	11.6	0.4	8.4
1/02/2025 7:15								1/02/2025 7:15	5.2	10.5	0.0	6.9	11.5	0.6	8.6
1/02/2025 7:30								1/02/2025 7:30	5.2	11.5	0.0	6.9	11.5	0.3	8.3
1/02/2025 7:45								1/02/2025 7:45	5.2	10.3	0.0	6.9	11.5	0.3	8.3
1/02/2025 8:00	5.2	20.2	0.0	6.8	11.8	4.6		1/02/2025 8:00	5.2	11.6	0.0	7.0	11.5	0.4	8.4
1/02/2025 8:15								1/02/2025 8:15	5.2	10.4	0.0	7.0	11.5	0.3	8.3
1/02/2025 8:30								1/02/2025 8:30	5.2	11.5	0.0	6.9	11.5	0.3	8.3
1/02/2025 8:45								1/02/2025 8:45	5.2	10.3	0.0	6.9	11.5	0.4	8.4
1/02/2025 9:00	5.5	41.9	0.0	6.7	11.8	3.4		1/02/2025 9:00	5.2	11.5	0.0	6.9	11.5	0.4	8.4
1/02/2025 9:15								1/02/2025 9:15	5.2	11.4	0.0	6.9	11.6	0.4	8.4
1/02/2025 9:30								1/02/2025 9:30	5.2	11.6	0.0	6.9	11.5	0.3	8.3
1/02/2025 9:45								1/02/2025 9:45	5.2	11.5	0.0	6.9	11.6	0.3	8.3
1/02/2025 10:00	5.0	17.1	0.0	6.6	11.9	3.1		1/02/2025 10:00	5.2	11.6	0.0	6.9	11.5	0.3	8.3
1/02/2025 10:15								1/02/2025 10:15	5.2	11.5	0.0	7.0	11.5	0.3	8.3
1/02/2025 10:30								1/02/2025 10:30	5.2	11.5	0.0	6.9	11.5	0.3	8.3
1/02/2025 10:45								1/02/2025 10:45	5.2	11.3	0.0	6.9	11.6	0.4	8.4
1/02/2025 11:00	6.2	57.0	0.0	7.2	11.5	3.8		1/02/2025 11:00	5.2	11.5	0.0	7.0	11.5	0.3	8.3
1/02/2025 11:15								1/02/2025 11:15	5.2	11.5	0.0	7.0	11.6	0.4	8.4
1/02/2025 11:30								1/02/2025 11:30	5.2	11.5	0.0	6.9	11.6	0.3	8.3
1/02/2025 11:45								1/02/2025 11:45	5.1	11.5	0.0	6.9	11.6	0.3	8.3
1/02/2025 12:00	5.9	56.0	0.0	7.2	11.6	3.8		1/02/2025 12:00	5.0	10.4	0.0	6.9	11.6	0.4	8.4
1/02/2025 12:15								1/02/2025 12:15	5.0	11.8	0.0	6.9	11.6	0.3	8.3
1/02/2025 12:30								1/02/2025 12:30	4.8	11.9	0.0	6.9	11.6	0.3	8.3
1/02/2025 12:45								1/02/2025 12:45	4.8	11.9	0.0	6.9	11.7	0.4	8.4
1/02/2025 13:00	4.6	17.3	0.0	6.6	12.0	3.3		1/02/2025 13:00	4.8	11.9	0.0	6.9	11.6	0.3	8.3
1/02/2025 13:15								1/02/2025 13:15	4.8	11.6	0.0	7.0	11.6	0.3	8.3
1/02/2025 13:30								1/02/2025 13:30	4.8	10.3	0.0	6.9	11.7	0.3	8.3
1/02/2025 13:45								1/02/2025 13:45	4.9	11.6	0.0	6.9	11.7	0.3	8.3
1/02/2025 14:00	4.7	17.4	0.0	6.6	12.0	3.8		1/02/2025 14:00	4.9	11.3	0.0	6.9	11.7	0.3	8.3
1/02/2025 14:15								1/02/2025 14:15	4.8	12.3	0.0	7.0	11.6	0.3	8.3
1/02/2025 14:30								1/02/2025 14:30	4.8	12.5	0.0	7.0	11.6	0.3	8.3
1/02/2025 14:45								1/02/2025 14:45	4.8	12.6	0.0	6.9	11.7	0.4	8.4
1/02/2025 15:00	5.3	44.8	0.0	7.0	11.8	3.0		1/02/2025 15:00	4.7	12.3	0.0	6.9	11.7	0.3	8.3
1/02/2025 15:15								1/02/2025 15:15	4.7	12.2	0.0	6.9	11.7	0.3	8.3
1/02/2025 15:30								1/02/2025 15:30	4.7	12.0	0.0	7.0	11.7	0.3	8.3
1/02/2025 15:45								1/02/2025 15:45	4.7	12.0	0.0	7.0	11.7	0.3	8.3
1/02/2025 16:00	4.4	17.3	0.0	6.6	12.1	3.8		1/02/2025 16:00	4.6	11.6	0.0	7.0	11.7	0.5	8.5
1/02/2025 16:15								1/02/2025 16:15	4.6	11.9	0.0	6.9	11.7	0.4	8.4
1/02/2025 16:30								1/02/2025 16:30	4.6	11.9	0.0	7.0	11.7	0.3	8.3
1/02/2025 16:45								1/02/2025 16:45	4.6	11.9	0.0	6.9	11.7	0.3	8.3
1/02/2025 17:00	4.4	17.9	0.0	6.6	12.1	3.2		1/02/2025 17:00	4.6	10.6	0.0	7.0	11.7	0.3	8.3
1/02/2025 17:15								1/02/2025 17:15	4.6	12.0	0.0	7.0	11.7	0.3	8.3
1/02/2025 17:30								1/02/2025 17:30	4.6	12.0	0.0	7.0	11.7	0.3	8.3
1/02/2025 17:45								1/02/2025 17:45	4.7	11.0	0.0	6.8	11.7	0.3	8.3
1/02/2025 18:00	4.5	18.6	0.0	6.7	12.0	3.3		1/02/2025 18:00	4.7	12.3	0.0	6.9	11.7	0.4	8.4
1/02/2025 18:15								1/02/2025 18:15	4.7	12.4	0.0	7.0	11.7	0.3	8.3
1/02/2025 18:30								1/02/2025 18:30	4.7	12.7	0.0	6.9	11.7	0.5	8.5
1/02/2025 18:45								1/02/2025 18:45	4.7	12.7	0.0	7.0	11.7	0.3	8.3
1/02/2025 19:00	4.6	18.9	0.0	6.7	12.0	3.6		1/02/2025 19:00	4.8	13.0	0.0	7.0	11.7	0.4	8.4
1/02/2025 19:15								1/02/2025 19:15	4.8	13.2	0.0	6.9	11.7	1.9	8.9
1/02/2025 19:30								1/02/2025 19:30	4.8	13.4	0.0	7.0	11.7	0.3	8.3
1/02/2025 19:45								1/02/2025 19:45	4.8	13.6	0.0	7.0	11.7	0.5	8.5
1/02/2025 20:00	5.4	58.0	0.0	7.1	11.7	3.7		1/02/2025 20:00	4.8	13.8	0.0	7.0	11.7	0.4	8.4
1/02/2025 20:15								1/02/2025 20:15	4.8	13.8	0.0	7.0	11.7	0.3	8.3
1/02/2025 20:30								1/02/2025 20:30	4.8	12.6	0.0	7.0	11.7	0.4	8.4
1/02/2025 20:45								1/02/2025 20:45	4.8	14.0	0.0	7.0	11.7	0.4	8.4
1/02/2025 21:00	4.6	19.8	0.0	6.6	12.0	3.1		1/02/2025 21:00	4.8	14.1	0.0	7.0	11.6	0.5	8.5
1/02/2025 21:15								1/02/2025 21:15	4.8	14.2	0.0	7.0	11.6	0.4	8.4
1/02/2025 21:30								1/02/2025 21:30	4.8	12.9	0.0	7.0	11.6	0.4	8.4
1/02/2025 21:45								1/02/2025 21:45	4.8	14.4	0.0	7.0	11.6	0.7	8.7
1/02/2025 22:00	4.7	27.3	0.0	6.6	12.0	3.3		1/02/2025 22:00	4.8	14.5	0.0	7.0	11.6	0.5	8.5
1/02/2025 22:15								1/02/2025 22:15	4.8	14.5	0.0	7.0	11.6	0.5	8.5
1/02/2025 22:30								1/02/2025 22:30	4.8	13.3	0.0	7.0	11.6	0.6	8.6
1/02/2025 22:45								1/02/2025 22:45	4.8	14.8	0.0	7.0	11.7	0.5	8.5
1/02/2025 23:00	4.6	20.3	0.0	6.6	12.0	4.0		1/02/2025 23:00	4.8	14.6	0.0	7.0	11.6	0.6	8.6
1/02/2025 23:15								1/02/2025 23:15	4.8	14.7	0.0	7.0	11.6	1.1	9.1
1/02/2025 23:30								1/02/2025 23:30	4.8	14.7	0.0	7.0	11.6	0.4	8.4
1/02/2025 23:45								1/02/2025 23:45	4.8	14.6	0.0	6.9	11.6	0.6	8.6
1/03/2025 0:00	5.7	60.1	0.0	7.2	11.7	3.4		1/03/2025 0:00	4.8	14.5	0.0	7.0	11.6	0.4	8.4
1/03/2025 0:15								1/03/2025 0:15	4.8	14.5	0.0	7.0	11.7	0.4	8.4
1/03/2025 0:30								1/03/2025 0:30	4.8	14.3	0.0	7.0	11.6	0.4	8.4
1/03/2025 0:45								1/03/2025 0:45	4.8	14.3	0.0	7.0	11.6	0.5	8.5
1/03/2025 1:00	4.5	19.7	0.0	6.6	12.0	3.3		1/03/2025 1:00	4.8	14.3	0.0	6.9	11.6	0.5	8.5
1/03/2025 1:15								1/03/2025 1:15	4.8	14.1	0.0	6.9	11.6	0.4	8.4
1/03/2025 1:30								1/03/2025 1:30	4.8	12.7	0.0	7.0	11.6	0.4	8.4
1/03/2025 1:45								1/03/2025 1:45	4.8	14.1	0.0	6.9	11.6	0.4	8.4
1/03/2025 2:00															

1/03/2025 1730							1/03/2025 1730	4.5	23.2	0.0	7.2	11.8	10.0	15.0
1/03/2025 1745							1/03/2025 1745	4.5	25.1	0.0	7.2	11.7	11.0	16.0
1/03/2025 1800	5.6	61.9	0.0	7.2	11.6	13.0	1/03/2025 1800	4.5	27.4	0.0	7.2	11.7	14.2	19.2
1/03/2025 1815							1/03/2025 1815	4.5	28.9	0.0	7.3	11.7	13.5	18.5
1/03/2025 1830							1/03/2025 1830	4.4	31.2	0.0	7.3	11.7	12.1	17.1
1/03/2025 1845							1/03/2025 1845	4.5	29.0	0.0	7.3	11.7	14.5	19.5
1/03/2025 1900	5.5	67.5	0.0	7.2	11.6	19.3	1/03/2025 1900	4.5	33.9	0.0	7.2	11.7	10.3	15.3
1/03/2025 1915							1/03/2025 1915	4.5	30.7	0.0	7.4	11.6	7.4	15.4
1/03/2025 1930							1/03/2025 1930	4.6	34.2	0.0	7.3	11.6	5.2	13.2
1/03/2025 1945							1/03/2025 1945	4.6	34.2	0.0	7.3	11.6	4.9	12.9
1/03/2025 2000	4.5	40.3	0.0	6.9	12.0	11.9	1/03/2025 2000	4.7	34.0	0.0	7.2	11.6	6.2	14.2
1/03/2025 2015							1/03/2025 2015	4.7	33.4	0.0	7.3	11.6	4.4	12.4
1/03/2025 2030							1/03/2025 2030	4.7	32.6	0.0	7.3	11.6	2.5	10.5
1/03/2025 2045							1/03/2025 2045	4.7	32.5	0.0	7.3	11.6	2.4	10.4
1/03/2025 2100	5.8	67.5	0.0	7.2	11.5	7.5	1/03/2025 2100	4.8	31.7	0.0	7.3	11.6	1.8	9.8
1/03/2025 2115							1/03/2025 2115	4.8	31.4	0.0	7.3	11.6	1.2	9.2
1/03/2025 2130							1/03/2025 2130	4.8	30.7	0.0	7.3	11.6	1.0	9.0
1/03/2025 2145							1/03/2025 2145	4.8	30.5	0.0	7.3	11.6	1.0	9.0
1/03/2025 2200	5.0	47.8	0.0	7.0	11.8	4.6	1/03/2025 2200	4.8	30.3	0.0	7.3	11.5	0.6	8.6
1/03/2025 2215							1/03/2025 2215	4.8	30.9	0.0	7.3	11.6	0.9	8.9
1/03/2025 2230							1/03/2025 2230	4.8	30.7	0.0	7.3	11.6	0.8	8.8
1/03/2025 2245							1/03/2025 2245	4.9	30.5	0.0	7.3	11.6	2.0	10.0
1/03/2025 2300	5.9	67.0	0.0	7.2	11.5	4.5	1/03/2025 2300	4.9	30.7	0.0	7.3	11.5	0.7	8.7
1/03/2025 2315							1/03/2025 2315	4.9	30.8	0.0	7.3	11.6	1.5	9.5
1/03/2025 2330							1/03/2025 2330	4.9	30.6	0.0	7.3	11.6	0.6	8.6
1/03/2025 2345							1/03/2025 2345	4.9	30.0	0.0	7.2	11.5	0.5	8.5
1/04/2025 0000	4.7	35.6	0.0	6.8	11.9	4.2	1/04/2025 0000	4.9	29.3	0.0	7.3	11.6	0.4	8.4
1/04/2025 0015							1/04/2025 0015	4.9	25.9	0.0	7.3	11.6	0.5	8.5
1/04/2025 0030							1/04/2025 0030	4.9	28.3	0.0	7.2	11.5	0.7	8.7
1/04/2025 0045							1/04/2025 0045	4.9	27.7	0.0	7.2	11.6	1.1	8.9
1/04/2025 1000	5.9	66.3	0.0	7.2	11.5	3.8	1/04/2025 1000	4.9	27.6	0.0	7.2	11.5	0.4	8.4
1/04/2025 1015							1/04/2025 1015	4.9	26.9	0.0	7.3	11.5	0.4	8.4
1/04/2025 1030							1/04/2025 1030	4.9	26.8	0.0	7.3	11.5	0.4	8.4
1/04/2025 1045							1/04/2025 1045	5.0	26.1	0.0	7.2	11.5	0.4	8.4
1/04/2025 2000	5.9	64.9	0.0	7.2	11.6	3.5	1/04/2025 2000	5.0	23.6	0.0	7.2	11.5	0.4	8.4
1/04/2025 2015							1/04/2025 2015	5.0	26.0	0.0	7.2	11.5	0.3	8.3
1/04/2025 2030							1/04/2025 2030	5.0	22.9	0.0	7.2	11.5	0.4	8.4
1/04/2025 2045							1/04/2025 2045	5.0	24.4	0.0	7.2	11.5	0.4	8.4
1/04/2025 3000	4.8	30.9	0.0	6.7	11.9	5.9	1/04/2025 3000	5.0	23.0	0.0	7.2	11.5	0.4	8.4
1/04/2025 3015							1/04/2025 3015	5.0	26.7	0.0	7.2	11.5	0.4	8.4
1/04/2025 3030							1/04/2025 3030	5.0	23.5	0.0	7.3	11.5	0.4	8.4
1/04/2025 3045							1/04/2025 3045	5.0	29.2	0.0	7.2	11.5	0.5	8.5
1/04/2025 4000	5.9	64.3	0.0	7.2	11.5	3.1	1/04/2025 4000	5.0	23.3	0.0	7.2	11.5	0.4	8.4
1/04/2025 4015							1/04/2025 4015	5.0	25.3	0.0	7.1	11.5	0.3	8.3
1/04/2025 4030							1/04/2025 4030	5.0	22.6	0.0	7.2	11.5	0.5	8.5
1/04/2025 4045							1/04/2025 4045	5.0	25.0	0.0	7.1	11.5	0.5	8.5
1/04/2025 5000	5.3	53.0	0.0	6.9	11.8	4.7	1/04/2025 5000	5.0	24.6	0.0	7.1	11.6	0.3	8.3
1/04/2025 5015							1/04/2025 5015	5.0	24.2	0.0	7.1	11.5	0.5	8.5
1/04/2025 5030							1/04/2025 5030	5.0	21.5	0.0	7.1	11.5	0.4	8.4
1/04/2025 5045							1/04/2025 5045	4.9	23.6	0.0	7.1	11.5	0.4	8.4
1/04/2025 6000	4.8	29.6	0.0	6.8	11.9	3.2	1/04/2025 6000	5.0	23.2	0.0	7.1	11.6	0.7	8.7
1/04/2025 6015							1/04/2025 6015	5.0	22.9	0.0	7.2	11.5	0.9	8.9
1/04/2025 6030							1/04/2025 6030	5.0	22.5	0.0	7.2	11.5	0.3	8.3
1/04/2025 6045							1/04/2025 6045	5.0	22.4	0.0	7.2	11.5	0.3	8.3
1/04/2025 7000	5.9	68.0	0.0	7.2	11.6	3.4	1/04/2025 7000	5.0	21.7	0.0	7.1	11.6	0.4	8.4
1/04/2025 7015							1/04/2025 7015	5.0	21.9	0.0	7.1	11.5	0.5	8.5
1/04/2025 7030							1/04/2025 7030	5.0	21.3	0.0	7.2	11.5	0.4	8.4
1/04/2025 7045							1/04/2025 7045	5.0	21.3	0.0	7.2	11.5	0.3	8.3
1/04/2025 8000	4.8	26.8	0.0	6.7	11.9	3.1	1/04/2025 8000	5.0	21.1	0.0	7.1	11.5	0.4	8.4
1/04/2025 8015							1/04/2025 8015	5.0	20.5	0.0	7.1	11.5	0.8	8.8
1/04/2025 8030							1/04/2025 8030	5.0	18.6	0.0	7.1	11.5	0.3	8.3
1/04/2025 8045							1/04/2025 8045	5.0	18.2	0.0	7.1	11.5	0.5	8.5
1/04/2025 9000	5.9	69.8	0.0	7.2	11.5	4.2	1/04/2025 9000	5.1	20.1	0.0	7.0	11.5	0.3	8.3
1/04/2025 9015							1/04/2025 9015	5.1	19.9	0.0	7.1	11.5	0.4	8.4
1/04/2025 9030							1/04/2025 9030	5.1	17.9	0.0	7.0	11.5	0.8	8.8
1/04/2025 9045							1/04/2025 9045	5.1	19.7	0.0	7.0	11.5	0.4	8.4
1/04/2025 10000	4.9	25.1	0.0	6.6	11.9	3.1	1/04/2025 10000	5.1	19.7	0.0	7.1	11.5	0.5	8.5
1/04/2025 101015							1/04/2025 101015	5.1	19.8	0.0	7.1	11.5	0.3	8.3
1/04/2025 103030							1/04/2025 103030	5.1	19.6	0.0	7.1	11.5	0.4	8.4
1/04/2025 104545							1/04/2025 104545	5.1	17.4	0.0	7.1	11.5	0.3	8.3
1/04/2025 110060	5.0	25.0	0.0	6.7	11.9	3.6	1/04/2025 110060	5.2	19.3	0.0	7.1	11.6	0.1	8.1
1/04/2025 111575							1/04/2025 111575	5.1	17.3	0.0	7.1	11.6	0.1	8.1
1/04/2025 113090							1/04/2025 113090	5.4	28.6	0.0	7.3	11.5	0.1	8.1
1/04/2025 114505							1/04/2025 114505	6.1	44.9	0.0	7.7	11.3	0.2	8.2
1/04/2025 120020	6.0	63.7	0.0	7.2	11.5	4.0	1/04/2025 120020	6.1	38.9	0.0	7.6	11.4	1.1	9.1
1/04/2025 121535							1/04/2025 121535	6.1	38.5	0.0	7.6	11.4	0.2	8.2
1/04/2025 122050	5.9	62.9	0.0	7.2	11.6	4.1	1/04/2025 122050	6.0	44.5	0.0	7.7	11.4	0.5	8.5
1/04/2025 122565	5.6	42.4	0.0	7.1	11.6	3.1	1/04/2025 122565	5.7	28.4	0.0	7.6	11.5	3.9	11.9
1/04/2025 123080	5.2	25.6	0.0	6.7	11.8	3.4	1/04/2025 123080	5.3	18.0	0.0	7.2	11.6	0.8	8.4
1/04/2025 123595	5.1	26.4	0.0	6.7	11.8	3.5	1/04/2025 123595	5.3	18.7	0.0	7.1	11.6	1.4	8.8
1/04/2025 124110	5.1	25.1	0.0	6.7	11.8	4.0	1/04/2025 124110	5.3	17.6	0.0	7.1	11.6	0.2	8.2
1/04/2025 124625	5.1	25.1	0.0	6.6	11.8	3.9	1/04/2025 124625	5.3	17.9	0.0	7.1	11.6	0.7	8.7
1/04/2025 125140	5.1	25.2	0.0	6.7	11.8	3.1	1/04/2025 125140	5.3	17.7	0.0	7.1	11.6	0.2	8.2
1/04/2025 125655	5.2	25.4	0.0	6.7	11.8	3.0	1/04/2025 125655	5.3	18.0	0.0	7.1	11.6	1.1	8.9
1/04/2025 126170	5.2	24.5	0.0	6.6	11.8	3.3	1/04/2025 126170	5.3	18.0	0.0	7.1	11.6	0.2	8.2
1/04/2025 126685	5.2	25.6	0.0	6.6	11.8	4.7	1/04/2025 126685	5.3	16.9	0.0	7.1	11.6	1.8	9.8
1/04/2025 127200	5.2	25.7	0.0	6.7	11.8	3.0	1/04/2025 127200	5.3	18.1	0.0	7.0	11.6	0.2	8.2
1/04/2025 127715	5.2	25.9	0.0	6.7	11.8	4.1	1/04/2025 127715	5.3	18.5	0.0	7.2	11.6	0.8	8.8
1/04/2025 128230	5.2	26.0	0.0	6.7	11.8	4.1	1/04/2025 128230	5.3	18.3	0.0	7.1	11.5	0.3	8.3
1/04/2025 128745	5.9	62.1	0.0	7.1	11.6	3.3	1/04/2025 128745	6.0	45.3	0.0	7.5	11.4	0.3	8.3
1/04/2025 129260	6.1	63.0	0.0	7.2	11.5	3.5	1/04/2025 129260	5.3	18.0	0.0	7.1	11.6	0.2	8.2
1/04/2025 129775	6.1	62.2	0.0	7.2	11									

1/05/2025 4:15	6.4	61.5	0.0	7.2	11.5	4.0	1/05/2025 4:15	6.5	38.8	0.0	7.7	11.2	1.0	9.0
1/05/2025 4:30	5.4	27.3	0.0	6.8	11.8	3.8	1/05/2025 4:30	5.5	19.2	0.0	7.2	11.5	0.7	8.7
1/05/2025 4:45	5.3	26.3	0.0	6.7	11.8	3.7	1/05/2025 4:45	5.5	16.9	0.0	7.2	11.5	1.5	9.5
1/05/2025 5:00	5.3	26.1	0.0	6.7	11.8	4.6	1/05/2025 5:00	5.4	18.4	0.0	7.2	11.6	1.9	9.9
1/05/2025 5:15	6.3	60.5	0.0	7.2	11.5	6.2	1/05/2025 5:15	6.4	42.8	0.0	7.6	11.3	0.9	8.9
1/05/2025 5:30	6.4	62.3	0.0	7.2	11.5	3.3	1/05/2025 5:30	6.5	43.7	0.0	7.7	11.3	0.9	8.9
1/05/2025 5:45	6.4	62.6	0.0	7.2	11.5	4.8	1/05/2025 5:45	6.5	44.6	0.0	7.7	11.2	1.5	9.5
1/05/2025 6:00	5.5	28.3	0.0	7.0	11.7	3.6	1/05/2025 6:00	5.6	19.0	0.0	7.3	11.5	1.1	9.1
1/05/2025 6:15	5.3	25.2	0.0	6.7	11.8	3.4	1/05/2025 6:15	5.5	15.9	0.0	7.1	11.6	1.6	9.6
1/05/2025 6:30	5.3	24.8	0.0	6.7	11.8	3.4	1/05/2025 6:30	5.4	17.5	0.0	7.1	11.6	0.5	8.5
1/05/2025 6:45	5.3	24.3	0.0	6.7	11.8	3.5	1/05/2025 6:45	5.4	17.6	0.0	7.1	11.6	1.2	9.2
1/05/2025 7:00	5.3	24.2	0.0	6.6	11.8	6.4	1/05/2025 7:00	5.4	17.2	0.0	7.2	11.6	0.7	8.7
1/05/2025 7:15	6.3	62.7	0.0	7.2	11.5	4.0	1/05/2025 7:15	6.4	39.7	0.0	7.6	11.3	6.9	14.9
1/05/2025 7:30	6.3	63.4	0.0	7.2	11.5	3.8	1/05/2025 7:30	6.4	44.7	0.0	7.6	11.3	1.4	9.4
1/05/2025 7:45	6.0	45.2	0.0	7.2	11.5	4.1	1/05/2025 7:45	6.1	32.0	0.0	7.6	11.3	1.9	9.9
1/05/2025 8:00	5.3	24.3	0.0	6.7	11.8	3.4	1/05/2025 8:00	5.4	17.2	0.0	7.1	11.6	0.7	8.7
1/05/2025 8:15	5.3	23.6	0.0	6.7	11.8	3.9	1/05/2025 8:15	5.4	17.0	0.0	7.0	11.6	1.1	9.1
1/05/2025 8:30	5.3	23.4	0.0	6.7	11.8	3.3	1/05/2025 8:30	5.4	16.5	0.0	7.1	11.6	0.8	8.8
1/05/2025 8:45	5.8	52.2	0.0	6.9	11.7	3.7	1/05/2025 8:45	5.9	34.0	0.0	7.3	11.5	0.8	8.6
1/05/2025 9:00	6.3	61.4	0.0	7.2	11.5	3.5	1/05/2025 9:00	6.4	43.4	0.0	7.6	11.3	0.9	8.9
1/05/2025 9:15	6.3	60.7	0.0	7.2	11.5	4.0	1/05/2025 9:15	6.4	38.3	0.0	7.6	11.3	0.4	8.4
1/05/2025 9:30	6.3	60.1	0.0	7.3	11.5	4.5	1/05/2025 9:30	6.4	42.4	0.0	7.7	11.3	0.3	8.3
1/05/2025 9:45	5.3	23.5	0.0	6.7	11.8	4.0	1/05/2025 9:45	5.4	14.9	0.0	7.1	11.6	0.7	8.7
1/05/2025 10:00	5.3	22.9	0.0	6.7	11.9	3.3	1/05/2025 10:00	5.4	16.3	0.0	7.1	11.6	0.5	8.5
1/05/2025 10:15	5.3	22.6	0.0	6.6	11.8	3.1	1/05/2025 10:15	5.4	14.4	0.0	7.0	11.6	3.8	11.8
1/05/2025 10:30	6.3	59.8	0.0	7.2	11.5	4.1	1/05/2025 10:30	6.4	42.2	0.0	7.6	11.3	1.1	9.1
1/05/2025 10:45	6.4	59.8	0.0	7.2	11.5	4.8	1/05/2025 10:45	6.5	42.4	0.0	7.6	11.3	0.9	8.9
1/05/2025 11:00	5.5	25.2	0.0	6.9	11.8	3.3	1/05/2025 11:00	5.7	16.0	0.0	7.3	11.6	3.3	11.3
1/05/2025 11:15	5.4	22.6	0.0	6.7	11.8	3.2	1/05/2025 11:15	5.5	16.1	0.0	7.1	11.6	0.7	8.7
1/05/2025 11:30	5.4	22.3	0.0	6.7	11.8	3.1	1/05/2025 11:30	5.5	15.9	0.0	7.1	11.6	1.7	9.7
1/05/2025 11:45	5.4	22.0	0.0	6.7	11.8	3.1	1/05/2025 11:45	5.6	16.7	0.0	7.1	11.5	0.1	8.1
1/05/2025 12:00	6.4	58.4	0.0	7.2	11.5	3.2	1/05/2025 12:00	5.6	16.7	0.0	7.1	11.5	0.0	8.0
1/05/2025 12:15	6.5	59.9	0.0	7.2	11.5	3.1	1/05/2025 12:15	5.7	16.3	0.0	7.1	11.5	0.0	8.0
1/05/2025 12:30	6.6	60.1	0.0	7.2	11.4	4.1	1/05/2025 12:30	6.4	42.2	0.0	7.6	11.3	1.1	9.1
1/05/2025 12:45	5.7	22.8	0.0	6.7	11.7	3.0	1/05/2025 12:45	5.7	16.5	0.0	7.1	11.5	0.1	8.1
1/05/2025 13:00	5.6	22.1	0.0	6.7	11.8	3.0	1/05/2025 13:00	5.8	14.8	0.0	7.0	11.5	0.0	8.0
1/05/2025 13:15	5.7	22.0	0.0	6.7	11.7	3.0	1/05/2025 13:15	5.8	16.3	0.0	7.1	11.5	1.2	9.2
1/05/2025 13:30	5.7	21.6	0.0	6.7	11.7	3.4	1/05/2025 13:30	5.9	19.2	0.0	7.1	11.4	0.2	8.2
1/05/2025 13:45	5.7	21.6	0.0	6.6	11.7	3.2	1/05/2025 13:45	5.9	16.1	0.0	7.1	11.4	0.1	8.1
1/05/2025 14:00	6.8	60.4	0.0	7.2	11.4	3.4	1/05/2025 14:00	5.9	14.6	0.0	7.1	11.4	0.0	8.0
1/05/2025 14:15	6.9	60.5	0.0	7.2	11.4	3.0	1/05/2025 14:15	5.9	16.0	0.0	7.1	11.4	0.0	8.0
1/05/2025 14:30	6.9	60.3	0.0	7.3	11.4	6.4	1/05/2025 14:30	6.0	16.0	0.0	7.0	11.4	0.0	8.0
1/05/2025 14:45	5.9	22.1	0.0	6.7	11.7	3.2	1/05/2025 14:45	6.0	15.8	0.0	7.0	11.4	0.2	8.2
1/05/2025 15:00	5.9	21.5	0.0	6.7	11.7	4.1	1/05/2025 15:00	6.1	14.2	0.0	7.1	11.4	0.0	8.0
1/05/2025 15:15	6.0	21.2	0.0	6.6	11.7	3.2	1/05/2025 15:15	6.1	15.8	0.0	7.1	11.4	0.0	8.0
1/05/2025 15:30	6.0	21.1	0.0	6.7	11.6	3.3	1/05/2025 15:30	6.1	15.8	0.0	7.1	11.4	0.1	8.1
1/05/2025 15:45	7.0	58.7	0.0	7.2	11.3	3.1	1/05/2025 15:45	6.1	15.7	0.0	7.1	11.3	0.0	8.0
1/05/2025 16:00	7.1	58.3	0.0	7.3	11.3	3.8	1/05/2025 16:00	6.1	14.1	0.0	7.0	11.3	0.0	8.0
1/05/2025 16:15	6.1	22.4	0.0	6.8	11.6	3.3	1/05/2025 16:15	6.1	15.6	0.0	7.0	11.4	0.0	8.0
1/05/2025 16:30	6.0	21.3	0.0	6.7	11.7	3.2	1/05/2025 16:30	6.1	14.1	0.0	7.0	11.3	0.0	8.0
1/05/2025 16:45	6.0	21.0	0.0	6.6	11.6	3.4	1/05/2025 16:45	6.1	15.5	0.0	7.0	11.3	0.0	8.0
1/05/2025 17:00	5.9	20.9	0.0	6.7	11.7	7.7	1/05/2025 17:00	6.1	15.6	0.0	7.0	11.3	0.2	8.2
1/05/2025 17:15	7.0	57.1	0.0	7.2	11.4	3.5	1/05/2025 17:15	6.1	15.4	0.0	7.0	11.4	0.0	8.0
1/05/2025 17:30	7.0	57.1	0.0	7.3	11.3	3.9	1/05/2025 17:30	6.1	13.9	0.0	7.0	11.3	0.0	8.0
1/05/2025 17:45	6.0	22.5	0.0	6.8	11.6	3.0	1/05/2025 17:45	6.0	15.4	0.0	7.0	11.4	0.0	8.0
1/05/2025 18:00	5.9	21.2	0.0	6.7	11.7	3.5	1/05/2025 18:00	6.0	15.5	0.0	7.0	11.4	0.6	8.6
1/05/2025 18:15	5.8	20.8	0.0	6.6	11.7	3.1	1/05/2025 18:15	6.0	15.5	0.0	7.0	11.4	0.0	8.0
1/05/2025 18:30	6.7	56.9	0.0	7.1	11.5	3.6	1/05/2025 18:30	6.0	15.5	0.0	7.0	11.4	0.0	8.0
1/05/2025 18:45	6.7	45.0	0.0	7.2	11.4	4.2	1/05/2025 18:45	5.9	15.3	0.0	7.0	11.4	0.0	8.0
1/05/2025 19:00	5.8	21.3	0.0	6.7	11.7	3.4	1/05/2025 19:00	5.9	15.4	0.0	7.0	11.4	0.0	8.0
1/05/2025 19:15	5.7	20.9	0.0	6.6	11.7	3.4	1/05/2025 19:15	5.9	15.2	0.0	7.0	11.4	0.0	8.0
1/05/2025 19:30	6.7	48.4	0.0	7.2	11.4	4.4	1/05/2025 19:30	5.8	15.3	0.0	7.0	11.5	0.7	8.7
1/05/2025 19:45	6.2	40.3	0.0	6.8	11.7	4.7	1/05/2025 19:45	5.8	15.2	0.0	7.0	11.5	0.0	8.0
1/05/2025 20:00	7.0	56.5	0.0	7.3	11.4	7.6	1/05/2025 20:00	5.7	15.3	0.0	7.0	11.5	0.0	8.0
1/05/2025 20:15	7.0	57.7	0.0	7.2	11.4	5.7	1/05/2025 20:15	5.7	15.3	0.0	7.0	11.5	0.0	8.0
1/05/2025 20:30	6.1	27.6	0.0	7.1	11.6	3.2	1/05/2025 20:30	5.7	13.8	0.0	7.0	11.5	0.2	8.2
1/05/2025 20:45	5.7	22.1	0.0	6.7	11.8	3.1	1/05/2025 20:45	5.7	15.2	0.0	7.0	11.5	0.1	8.1
1/05/2025 21:00	5.6	21.4	0.0	6.7	11.8	3.0	1/05/2025 21:00	5.7	15.2	0.0	7.0	11.5	0.0	8.0
1/05/2025 21:15	6.9	54.1	0.0	7.2	11.4	4.0	1/05/2025 21:15	5.8	14.9	0.0	7.0	11.5	0.0	8.0
1/05/2025 21:30	6.9	53.0	0.0	7.2	11.4	4.6	1/05/2025 21:30	5.6	15.1	0.0	7.0	11.5	0.0	8.0
1/05/2025 21:45	7.0	54.2	0.0	7.2	11.4	3.4	1/05/2025 21:45	5.6	14.8	0.0	7.0	11.5	0.0	8.0
1/05/2025 22:00	6.0	26.3	0.0	7.1	11.6	3.1	1/05/2025 22:00	5.6	13.5	0.0	7.0	11.5	0.1	8.1
1/05/2025 22:15	6.0	35.2	0.0	6.8	11.8	6.2	1/05/2025 22:15	5.6	14.9	0.0	7.0	11.5	0.0	8.0
1/05/2025 22:30	5.5	22.3	0.0	6.7	11.8	5.2	1/05/2025 22:30	5.5	15.0	0.0	7.0	11.6	0.0	8.0
1/05/2025 22:45	5.4	20.7	0.0	6.7	11.8	3.0	1/05/2025 22:45	5.5	14.9	0.0	7.0	11.5	0.0	8.0
1/05/2025 23:00	5.4	22.1	0.0	6.7	11.8	3.3	1/05/2025 23:00	5.5	13.4	0.0	6.9	11.5	0.4	8.4
1/05/2025 23:15	6.8	55.7	0.0	7.2	11.5	3.1	1/05/2025 23:15	5.5	14.8	0.0	6.9	11.6	0.0	8.0
1/05/2025 23:30	6.8	54.4	0.0	7.2	11.4	6.1	1/05/2025 23:30	5.5	14.8	0.0	7.0	11.5	0.1	8.1
1/05/2025 23:45	5.5	21.8	0.0	6.7	11.8	3.5	1/05/2025 23:45	5.5	14.8	0.0	7.0	11.6	0.0	8.0