



**Eagle Mountain - Woodfibre Gas Pipeline Project
Woodfibre Site Waste Discharge Approval AE-
111973 Report**

Reporting Week	Jan 29 th to Feb 4 th , 2024
Report #	6
Page	1 of 6

Eagle Mountain - Woodfibre Gas Pipeline Project

Woodfibre Site Waste Discharge Approval Report

Report Period: January 29th to February 4th, 2024



**Eagle Mountain - Woodfibre Gas Pipeline Project
Woodfibre Site Waste Discharge Approval AE-
111973 Report**

Reporting Week	Jan 29 th to Feb 4 th , 2024
Report #	6
Page	2 of 6

Contents

Preamble	3
Introduction	3
Sampling Methodology	4
Summary	5
Activities	5
Point of Discharge from Water Treatment System Summary	5
Exceedance details	5
Receiving Environment Summary.....	5
Exceedance details	6

Appendix A: Point of Discharge from Water Treatment System Documentation

Appendix B: Receiving Environment Documentation



**Eagle Mountain - Woodfibre Gas Pipeline Project
Woodfibre Site Waste Discharge Approval AE-
111973 Report**

Reporting Week	Jan 29 th to Feb 4 th , 2024
Report #	6
Page	3 of 6

Preamble

This report is the initial report for the British Columbia Energy Regulator (BCER) Waste Discharge Approval (BCER number AE 111973) for the FortisBC Eagle Mountain – Woodfibre Gas Pipeline (EGP) Project for the BC Rail site. This report covers the reporting period from January 29th to February 4th, 2024 and includes the results of water quality monitoring and sampling of the receiving environment (upstream and downstream) at the Woodfibre Site. During this timeframe, no discharge into the receiving environment at the Woodfibre Site occurred from the water treatment plant.

FortisBC has retained Triton Environmental Consultants Ltd. as the Qualified Professional to implement and oversee the monitoring and sampling program in the receiving environment. The data represented below, including laboratory reported exceedances, represent background conditions of the receiving environment, and are not related to EGP Project activities. The data collected and reported in this report represents background water quality conditions at the two receiving environment sampling sites as shown on the approved Waste Discharge Approval AE-111973.

Water Treatment Plant Update

Since the issuance of the Waste Discharge Approval (AE 111973) on December 8th, 2023, FortisBC’s tunnel contractor Frontier-Kemper Michels Joint Venture (FKM) has commenced shipping the water treatment plant (WTP) components to the Woodfibre site. No water treatment plant has been set up on site to date.

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 Approval AE-111973 Section 4.2:

The Approval Holder 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 approval. 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 date 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 this subject approval, and also made publicly available on the FortisBC Eagle Mountain-Woodfibre Gas Pipeline Project | Talking Energy webpage.



**Eagle Mountain - Woodfibre Gas Pipeline Project
Woodfibre Site Waste Discharge Approval AE-
111973 Report**

Reporting Week	Jan 29 th to Feb 4 th , 2024
Report #	6
Page	4 of 6

FortisBC requests that the BCER confirm the receipt of this submittal and confirm that the submission meets the requirements of reporting. Future reports will use this format unless otherwise directed by BCER.

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 Approval.

At the receiving environment, real time daily field readings of pH, temperature, NTU, electrical conductivity, DO, ORP and salinity are being taken using an AquaTROLL 600 datalogger upstream and downstream in the watercourse at the Woodfibre site. Visible sheen will be monitored with visual inspections during times of discharge or sampling. Real time and daily readings are being monitored at the same time with one piece of equipment, allowing all the daily readings to be real time.

At the point of discharge from the WTP, the parameters are being monitored using field equipment (YSI ProDSS) and sondes/real time meters make and models to be confirmed by the contractor. Table 1 and Table 2 below show how each parameter is being monitored.

Table 1. Monitoring Process at Point of Discharge from Water Treatment System

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 YSI ProDSS
	Temperature	Monitoring using YSI ProDSS
	NTU	Monitoring using YSI ProDSS
	Electrical Conductivity	Monitoring using YSI ProDSS
Weekly (or per batch) Lab Samples	List prescribed in permit	No Changes, still lab samples

Table 2. Receiving Environment (upstream and downstream) Monitoring Process

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	No changes, still lab samples



**Eagle Mountain - Woodfibre Gas Pipeline Project
Woodfibre Site Waste Discharge Approval AE-
111973 Report**

Reporting Week	Jan 29 th to Feb 4 th , 2024
Report #	6
Page	5 of 6

Receiving Environment equipment details: Sondes: Aqua-TROLL 600 made by In-Situ Inc. Sondes set up to log temperature, specific conductivity, salinity (in PSU), pH, ORP, DO (mg/L), and turbidity (NTU) at 10 minute intervals.

Point of Discharge from the water treatment system equipment details: YSI ProDSS with pH, conductivity, DO, ORP and turbidity probe that measure pH, temperature, NTU, electrical conductivity, ORP, DO and salinity.

Summary

Activities

- The real time water quality monitoring equipment (sondes) were deployed at the Woodfibre Site on December 18th, 2023.
- No discharges to the receiving environment have occurred from the water treatment plant within the reporting period. The water treatment plan has not yet been built and not tunneling is occurring.

Point of Discharge from Water Treatment System Summary

N/A - No discharge occurred during the reporting period.

Exceedance details

N/A - No discharge occurred during the reporting period.

Receiving Environment Summary


The receiving environment is being monitored as a permit requirement, currently, there are no discharges from the WTP to the receiving environment, so all recorded exceedances in the laboratory report are not project related and existing background quality.

Table 3: Upstream Monitoring Information

Date of Lab Sample	Real Time Monitored	Field Samples Taken	Results
2024-01-29	Yes	Yes-real time	Full set of lab sample results, photo and documentation are provided in Appendix B


Table 4: Downstream Monitoring Information

Date of Lab Sample	Real Time Monitored	Field Samples Taken	Results
2024-01-29	Yes	Yes-real time	Full set of lab sample results, photo and documentation are provided in Appendix B


 Eagle Mountain - Woodfibre Gas Pipeline Project Woodfibre Site Waste Discharge Approval AE- 111973 Report	Reporting Week	Jan 29 th to Feb 4 th , 2024
	Report #	6
	Page	6 of 6

Receiving Environment Monitoring Details


- Daily visible sheen checks have not been conducted in the receiving environment as there have not been any discharges from the WTP.
- All receiving environment lab results are in Appendix B.
- 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.

 Eagle Mountain - Woodfibre Gas Pipeline Project Woodfibre Site Waste Discharge Approval AE-111973 Report	Reporting Week	Jan 29 th to Feb 4 th , 2024
	Report #	6
	Appendix	A

Appendix A Point of Discharge from Water Treatment Plant Documentation

 Eagle Mountain - Woodfibre Gas Pipeline Project Woodfibre Site Waste Discharge Approval AE-111973 Report	Reporting Week	Jan 29 th to Feb 4 th , 2024
	Report #	6
	Appendix	A

No discharge from the water treatment plant, nothing to report

 Eagle Mountain - Woodfibre Gas Pipeline Project Woodfibre Site Waste Discharge Approval AE-111973 Report	Reporting Week	Jan 29 th to Feb 4 th , 2024
	Report #	6
	Appendix	B

Appendix B Receiving Environment Documentation



**Eagle Mountain - Woodfibre Gas Pipeline Project
Woodfibre Site Waste Discharge Approval
AE-111973 Report**

Reporting Week	Jan 29 th to Feb 4 th , 2024
Report #	6
Appendix	B

Receiving Environment Sample Analysis



**Eagle Mountain - Woodfibre Gas Pipeline Project
Woodfibre Site Waste Discharge Approval
AE-111973 Report**

Reporting Week	Jan 29 th to Feb 4 th , 2024
Report #	6
Appendix	B

Receiving Environment Lab Documentation



CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order : VA24A1677
Client : Triton Environmental Consultants Ltd.
Contact : [Redacted]
Address : [Redacted]
Telephone : [Redacted]
Project : 11964
PO : 11964 - Task 20 - Phase 3C-4C
C-O-C number : [Redacted]
Sampler : [Redacted]
Site : Water Analysis
Quote number : VA23-TRIT100-012
No. of samples received : 2
No. of samples analysed : 2

Page : 1 of 7
Laboratory : ALS Environmental - Vancouver
Account Manager : Can Dang
Address : [Redacted]
Telephone : [Redacted]
Date Samples Received : 29-Jan-2024 17:20
Date Analysis Commenced : 30-Jan-2024
Issue Date : 05-Feb-2024 16:44

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
- Guideline Comparison

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>
Angelo Salandanan	Lab Assistant	Metals, Burnaby, British Columbia
Cindy Tang	Team Leader - Inorganics	Inorganics, Burnaby, British Columbia
Ilnaz Badbezanchi	Supervisor - Metals Prep & Mercury	Metals, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
Kim Jensen	Department Manager - Metals	Inorganics, Burnaby, British Columbia
Owen Cheng		Metals, Burnaby, British Columbia
Paolo Obillo	Account Manager Assistant	Administration, Burnaby, British Columbia
Sam Silveira	Lab Assistant	Metals, Burnaby, British Columbia



No Breaches Found

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.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

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

>: greater than.

<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.



Analytical Results Evaluation

Matrix: Water				Client sample ID	WLNG DS 1	WLNG US 1	---	---	---	---	---
				Sampling date/time	29-Jan-2024 10:25	29-Jan-2024 09:48	---	---	---	---	---
				Sub-Matrix	Water	Water	---	---	---	---	---
Analyte	CAS Number	Method/Lab	Unit	VA24A1677-001	VA24A1677-002	-----	-----	-----	-----	-----	-----
Field Tests											
Conductivity, field	----	EF001/VA	µS/cm	40.000	38.000	---	---	---	---	---	---
pH, field	----	EF001/VA	pH units	7.02	6.56	---	---	---	---	---	---
Temperature, field	----	EF001/VA	°C	7.70	7.10	---	---	---	---	---	---
Physical Tests											
Hardness (as CaCO3), dissolved	----	EC100/VA	mg/L	12.9	5.47	---	---	---	---	---	---
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	mg/L	13.1	5.81	---	---	---	---	---	---
Solids, total dissolved [TDS]	----	E162/VA	mg/L	27	25	---	---	---	---	---	---
Solids, total suspended [TSS]	----	E160/VA	mg/L	4.6	4.2	---	---	---	---	---	---
Alkalinity, total (as CaCO3)	----	E290/VA	mg/L	11.6	4.6	---	---	---	---	---	---
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/VA	mg/L	0.0141	0.0182	---	---	---	---	---	---
Bromide	24959-67-9	E235.Br-L/VA	mg/L	<0.050	<0.050	---	---	---	---	---	---
Chloride	16887-00-6	E235.Cl/VA	mg/L	0.57	0.62	---	---	---	---	---	---
Fluoride	16984-48-8	E235.F/VA	mg/L	<0.020	<0.020	---	---	---	---	---	---
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	mg/L	0.0908	0.0401	---	---	---	---	---	---
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	mg/L	0.0013	0.0014	---	---	---	---	---	---
Nitrogen, total	7727-37-9	E366/VA	mg/L	0.191	0.158	---	---	---	---	---	---
Phosphorus, total	7723-14-0	E372-U/VA	mg/L	0.0330	0.0551	---	---	---	---	---	---
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	mg/L	2.37	1.96	---	---	---	---	---	---
Organic / Inorganic Carbon											
Carbon, dissolved organic [DOC]	----	E358-L/VA	mg/L	4.37	3.77	---	---	---	---	---	---
Carbon, total organic [TOC]	----	E355-L/VA	mg/L	4.30	3.79	---	---	---	---	---	---
Total Sulfides											
Sulfide, total (as S)	18496-25-8	E395/VA	mg/L	<0.0015	<0.0015	---	---	---	---	---	---
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	mg/L	<0.0015	<0.0015	---	---	---	---	---	---
Sulfide, total (as H2S)	7783-06-4	E395/VA	mg/L	<0.0016	<0.0016	---	---	---	---	---	---
Total Metals											



Analytical Results Evaluation

Matrix: Water				Client sample ID	WLNG DS 1	WLNG US 1	----	----	----	----	----
				Sampling date/time	29-Jan-2024 10:25	29-Jan-2024 09:48	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit	VA24A1677-001	VA24A1677-002	-----	-----	-----	-----	-----	-----
Total Metals											
Aluminum, total	7429-90-5	E420/VA	mg/L	0.285	0.326	----	----	----	----	----	----
Antimony, total	7440-36-0	E420/VA	mg/L	<0.00010	<0.00010	----	----	----	----	----	----
Arsenic, total	7440-38-2	E420/VA	mg/L	0.00021	0.00026	----	----	----	----	----	----
Barium, total	7440-39-3	E420/VA	mg/L	0.00406	0.00302	----	----	----	----	----	----
Beryllium, total	7440-41-7	E420/VA	mg/L	<0.000100	<0.000100	----	----	----	----	----	----
Bismuth, total	7440-69-9	E420/VA	mg/L	<0.000050	<0.000050	----	----	----	----	----	----
Boron, total	7440-42-8	E420/VA	mg/L	<0.010	<0.010	----	----	----	----	----	----
Cadmium, total	7440-43-9	E420/VA	mg/L	0.0000108	0.0000107	----	----	----	----	----	----
Calcium, total	7440-70-2	E420/VA	mg/L	4.62	1.86	----	----	----	----	----	----
Cesium, total	7440-46-2	E420/VA	mg/L	<0.000010	<0.000010	----	----	----	----	----	----
Chromium, total	7440-47-3	E420/VA	mg/L	<0.00050	<0.00050	----	----	----	----	----	----
Cobalt, total	7440-48-4	E420/VA	mg/L	<0.00010	<0.00010	----	----	----	----	----	----
Copper, total	7440-50-8	E420/VA	mg/L	0.00118	0.00134	----	----	----	----	----	----
Iron, total	7439-89-6	E420/VA	mg/L	0.174	0.168	----	----	----	----	----	----
Lead, total	7439-92-1	E420/VA	mg/L	0.000152	0.000113	----	----	----	----	----	----
Lithium, total	7439-93-2	E420/VA	mg/L	<0.0010	<0.0010	----	----	----	----	----	----
Magnesium, total	7439-95-4	E420/VA	mg/L	0.383	0.284	----	----	----	----	----	----
Manganese, total	7439-96-5	E420/VA	mg/L	0.00739	0.00650	----	----	----	----	----	----
Mercury, total	7439-97-6	E508/VA	mg/L	<0.0000050	<0.0000050	----	----	----	----	----	----
Molybdenum, total	7439-98-7	E420/VA	mg/L	0.000444	0.000399	----	----	----	----	----	----
Nickel, total	7440-02-0	E420/VA	mg/L	<0.00050	<0.00050	----	----	----	----	----	----
Phosphorus, total	7723-14-0	E420/VA	mg/L	<0.050	0.061	----	----	----	----	----	----
Potassium, total	7440-09-7	E420/VA	mg/L	0.245	0.231	----	----	----	----	----	----
Rubidium, total	7440-17-7	E420/VA	mg/L	0.00039	0.00028	----	----	----	----	----	----
Selenium, total	7782-49-2	E420/VA	mg/L	<0.000050	<0.000050	----	----	----	----	----	----
Silicon, total	7440-21-3	E420/VA	mg/L	2.75	2.81	----	----	----	----	----	----
Silver, total	7440-22-4	E420/VA	mg/L	<0.000010	<0.000010	----	----	----	----	----	----
Sodium, total	7440-23-5	E420/VA	mg/L	1.08	1.03	----	----	----	----	----	----
Strontium, total	7440-24-6	E420/VA	mg/L	0.0159	0.00858	----	----	----	----	----	----



Analytical Results Evaluation

Matrix: Water				Client sample ID	WLNG DS 1	WLNG US 1	----	----	----	----	----
				Sampling date/time	29-Jan-2024 10:25	29-Jan-2024 09:48	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit	VA24A1677-001	VA24A1677-002	-----	-----	-----	-----	-----	-----
Total Metals											
Sulfur, total	7704-34-9	E420/VA	mg/L	<0.50	<0.50	----	----	----	----	----	----
Tellurium, total	13494-80-9	E420/VA	mg/L	<0.00020	<0.00020	----	----	----	----	----	----
Thallium, total	7440-28-0	E420/VA	mg/L	<0.000010	<0.000010	----	----	----	----	----	----
Thorium, total	7440-29-1	E420/VA	mg/L	<0.00010	<0.00010	----	----	----	----	----	----
Tin, total	7440-31-5	E420/VA	mg/L	<0.00010	<0.00010	----	----	----	----	----	----
Titanium, total	7440-32-6	E420/VA	mg/L	0.00620	0.00657	----	----	----	----	----	----
Tungsten, total	7440-33-7	E420/VA	mg/L	<0.00010	<0.00010	----	----	----	----	----	----
Uranium, total	7440-61-1	E420/VA	mg/L	0.000258	0.000224	----	----	----	----	----	----
Vanadium, total	7440-62-2	E420/VA	mg/L	0.00050	0.00051	----	----	----	----	----	----
Zinc, total	7440-66-6	E420/VA	mg/L	<0.0030	<0.0030	----	----	----	----	----	----
Zirconium, total	7440-67-7	E420/VA	mg/L	<0.00020	<0.00020	----	----	----	----	----	----
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/VA	mg/L	0.117	0.126	----	----	----	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	mg/L	<0.00010	<0.00010	----	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	mg/L	0.00015	0.00019	----	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/VA	mg/L	0.00322	0.00200	----	----	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/VA	mg/L	<0.000100	<0.000100	----	----	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/VA	mg/L	<0.000050	<0.000050	----	----	----	----	----	----
Boron, dissolved	7440-42-8	E421/VA	mg/L	<0.010	<0.010	----	----	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	mg/L	0.0000063	0.0000058	----	----	----	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	mg/L	4.57	1.79	----	----	----	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	mg/L	<0.000010	<0.000010	----	----	----	----	----	----
Chromium, dissolved	7440-47-3	E421/VA	mg/L	<0.00050	<0.00050	----	----	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/VA	mg/L	<0.00010	<0.00010	----	----	----	----	----	----
Copper, dissolved	7440-50-8	E421/VA	mg/L	0.00085	0.00108	----	----	----	----	----	----
Iron, dissolved	7439-89-6	E421/VA	mg/L	0.022	0.024	----	----	----	----	----	----
Lead, dissolved	7439-92-1	E421/VA	mg/L	<0.000050	<0.000050	----	----	----	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	mg/L	<0.0010	<0.0010	----	----	----	----	----	----



Analytical Results Evaluation

Matrix: Water				Client sample ID	WLNG DS 1	WLNG US 1	----	----	----	----	----
				Sampling date/time	29-Jan-2024 10:25	29-Jan-2024 09:48	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit	VA24A1677-001	VA24A1677-002	-----	-----	-----	-----	-----	
Dissolved Metals											
Magnesium, dissolved	7439-95-4	E421/VA	mg/L	0.354	0.244	----	----	----	----	----	
Manganese, dissolved	7439-96-5	E421/VA	mg/L	0.00172	0.00145	----	----	----	----	----	
Mercury, dissolved	7439-97-6	E509/VA	mg/L	<0.0000050	<0.0000050	----	----	----	----	----	
Molybdenum, dissolved	7439-98-7	E421/VA	mg/L	0.000418	0.000342	----	----	----	----	----	
Nickel, dissolved	7440-02-0	E421/VA	mg/L	<0.00050	<0.00050	----	----	----	----	----	
Phosphorus, dissolved	7723-14-0	E421/VA	mg/L	<0.050	0.055	----	----	----	----	----	
Potassium, dissolved	7440-09-7	E421/VA	mg/L	0.245	0.226	----	----	----	----	----	
Rubidium, dissolved	7440-17-7	E421/VA	mg/L	0.00030	0.00023	----	----	----	----	----	
Selenium, dissolved	7782-49-2	E421/VA	mg/L	<0.000050	<0.000050	----	----	----	----	----	
Silicon, dissolved	7440-21-3	E421/VA	mg/L	2.52	2.52	----	----	----	----	----	
Silver, dissolved	7440-22-4	E421/VA	mg/L	<0.000010	<0.000010	----	----	----	----	----	
Sodium, dissolved	7440-23-5	E421/VA	mg/L	1.05	1.05	----	----	----	----	----	
Strontium, dissolved	7440-24-6	E421/VA	mg/L	0.0149	0.00781	----	----	----	----	----	
Sulfur, dissolved	7704-34-9	E421/VA	mg/L	<0.50	<0.50	----	----	----	----	----	
Tellurium, dissolved	13494-80-9	E421/VA	mg/L	<0.00020	<0.00020	----	----	----	----	----	
Thallium, dissolved	7440-28-0	E421/VA	mg/L	<0.000010	<0.000010	----	----	----	----	----	
Thorium, dissolved	7440-29-1	E421/VA	mg/L	<0.00010	<0.00010	----	----	----	----	----	
Tin, dissolved	7440-31-5	E421/VA	mg/L	<0.00010	<0.00010	----	----	----	----	----	
Titanium, dissolved	7440-32-6	E421/VA	mg/L	0.00058	0.00072	----	----	----	----	----	
Tungsten, dissolved	7440-33-7	E421/VA	mg/L	<0.00010	<0.00010	----	----	----	----	----	
Uranium, dissolved	7440-61-1	E421/VA	mg/L	0.000175	0.000180	----	----	----	----	----	
Vanadium, dissolved	7440-62-2	E421/VA	mg/L	<0.00050	<0.00050	----	----	----	----	----	
Zinc, dissolved	7440-66-6	E421/VA	mg/L	0.0020	0.0014	----	----	----	----	----	
Zirconium, dissolved	7440-67-7	E421/VA	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], dissolved	18540-29-9	E532A/VA	mg/L	<0.00050	<0.00050	----	----	----	----	----	



Analytical Results Evaluation

Matrix: Water				Client sample ID	WLNG DS 1	WLNG US 1	----	----	----	----	----
				Sampling date/time	29-Jan-2024 10:25	29-Jan-2024 09:48	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit	VA24A1677-001	VA24A1677-002	-----	-----	-----	-----	-----	-----
Speciated Metals											
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	mg/L	<0.00050	<0.00050	----	----	----	----	----	----
Chromium, trivalent [Cr III], dissolved	16065-83-1	EC535A/VA	mg/L	<0.00050	<0.00050	----	----	----	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	mg/L	<0.00050	<0.00050	----	----	----	----	----	----

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Key:



CERTIFICATE OF ANALYSIS

Work Order : VA24A1677
Client : Triton Environmental Consultants Ltd.
Contact : [Redacted]
Address : [Redacted]
Telephone : [Redacted]
Project : 11964
PO : 11964 - Task 20 - Phase 3C-4C
C-O-C number : ----
Sampler : Aegean, Olivia
Site : Water Analysis
Quote number : VA23-TRIT100-012
No. of samples received : 2
No. of samples analysed : 2

Page : 1 of 7
Laboratory : ALS Environmental - Vancouver
Account Manager : [Redacted]
Address : [Redacted]
Telephone : [Redacted]
Date Samples Received : 29-Jan-2024 17:20
Date Analysis Commenced : 30-Jan-2024
Issue Date : 05-Feb-2024 16:44

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>
Angelo Salandanan	Lab Assistant	Metals, Burnaby, British Columbia
Cindy Tang	Team Leader - Inorganics	Inorganics, Burnaby, British Columbia
Ilmaz Badbezanchi	Supervisor - Metals Prep & Mercury	Metals, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
Kim Jensen	Department Manager - Metals	Inorganics, Burnaby, British Columbia
Owen Cheng		Metals, Burnaby, British Columbia
Paolo Obillo	Account Manager Assistant	Administration, Burnaby, British Columbia
Sam Silveira	Lab Assistant	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
µS/cm	microsiemens per centimetre
mg/L	milligrams per litre
pH units	pH units

<: 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					Client sample ID	WLNG DS 1	WLNG US 1	----	----	----
(Matrix: Water)					Client sampling date / time	29-Jan-2024 10:25	29-Jan-2024 09:48	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24A1677-001	VA24A1677-002	-----	-----	-----	
					Result	Result	----	----	----	
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm	40.000	38.000	----	----	----	
pH, field	----	EF001/VA	0.10	pH units	7.02	6.56	----	----	----	
Temperature, field	----	EF001/VA	0.10	°C	7.70	7.10	----	----	----	
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L	12.9	5.47	----	----	----	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	13.1	5.81	----	----	----	
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	27	25	----	----	----	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	4.6	4.2	----	----	----	
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	11.6	4.6	----	----	----	
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0141	0.0182	----	----	----	
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	0.57	0.62	----	----	----	
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	<0.020	<0.020	----	----	----	
Nitrate (as N)	14797-55-8	E235.NO3-L/V A	0.0050	mg/L	0.0908	0.0401	----	----	----	
Nitrite (as N)	14797-65-0	E235.NO2-L/V A	0.0010	mg/L	0.0013	0.0014	----	----	----	
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	0.191	0.158	----	----	----	
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0330	0.0551	----	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	2.37	1.96	----	----	----	
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	4.37	3.77	----	----	----	
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L	4.30	3.79	----	----	----	
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	0.285	0.326	----	----	----	



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG DS 1	WLNG US 1	----	----	----
Client sampling date / time					29-Jan-2024 10:25	29-Jan-2024 09:48	----	----	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24A1677-001	VA24A1677-002	-----	-----	-----	
					Result	Result	---	---	---	
Total Metals										
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	0.00021	0.00026	---	---	---	
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00406	0.00302	---	---	---	
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	0.0000108	0.0000107	---	---	---	
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	4.62	1.86	---	---	---	
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	0.00118	0.00134	---	---	---	
Iron, total	7439-89-6	E420/VA	0.010	mg/L	0.174	0.168	---	---	---	
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000152	0.000113	---	---	---	
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	0.383	0.284	---	---	---	
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00739	0.00650	---	---	---	
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	0.000444	0.000399	---	---	---	
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	0.061	---	---	---	
Potassium, total	7440-09-7	E420/VA	0.050	mg/L	0.245	0.231	---	---	---	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00039	0.00028	---	---	---	
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	2.75	2.81	---	---	---	
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	1.03	---	---	---	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0159	0.00858	---	---	---	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	<0.50	<0.50	---	---	---	
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L	<0.00020	<0.00020	---	---	---	



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG DS 1	WLNG US 1	----	----	----
Client sampling date / time					29-Jan-2024 10:25	29-Jan-2024 09:48	----	----	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24A1677-001	VA24A1677-002	-----	-----	-----	
					Result	Result	----	----	----	
Total Metals										
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	0.00620	0.00657	----	----	----	
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	0.000258	0.000224	----	----	----	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	0.00050	0.00051	----	----	----	
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	<0.0030	<0.0030	----	----	----	
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.117	0.126	----	----	----	
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	0.00015	0.00019	----	----	----	
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00322	0.00200	----	----	----	
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	0.0000063	0.0000058	----	----	----	
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	4.57	1.79	----	----	----	
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L	0.00085	0.00108	----	----	----	
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	0.022	0.024	----	----	----	
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	0.354	0.244	----	----	----	
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00172	0.00145	----	----	----	
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	0.000418	0.000342	----	----	----	



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG DS 1	WLNG US 1	----	----	----
Client sampling date / time					29-Jan-2024 10:25	29-Jan-2024 09:48	----	----	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24A1677-001	VA24A1677-002	-----	-----	-----	
					Result	Result	----	----	----	
Dissolved Metals										
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	0.055	----	----	----	
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L	0.245	0.226	----	----	----	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00030	0.00023	----	----	----	
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	2.52	2.52	----	----	----	
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	1.05	1.05	----	----	----	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0149	0.00781	----	----	----	
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	<0.50	<0.50	----	----	----	
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	0.00058	0.00072	----	----	----	
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	0.000175	0.000180	----	----	----	
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	0.0020	0.0014	----	----	----	
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], dissolved	18540-29-9	E532A/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Chromium, trivalent [Cr III], dissolved	16065-83-1	EC535A/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.

Please refer to the Accreditation section for an explanation of analyte accreditations.



QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : VA24A1677</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 20 - Phase 3C-4C</p> <p>C-O-C number : ----</p> <p>Sampler : [REDACTED]</p> <p>Site : Water Analysis</p> <p>Quote number : VA23-TRIT100-012</p> <p>No. of samples received : 2</p> <p>No. of samples analysed : 2</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 : 29-Jan-2024 17:20</p> <p>Issue Date : 05-Feb-2024 16:45</p>
--	---

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		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	29-Jan-2024	01-Feb-2024	28 days	3 days	✔	02-Feb-2024	28 days	4 days	✔
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG US 1	E298	29-Jan-2024	01-Feb-2024	28 days	3 days	✔	02-Feb-2024	28 days	4 days	✔
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG DS 1	E235.Br-L	29-Jan-2024	01-Feb-2024	28 days	3 days	✔	01-Feb-2024	28 days	3 days	✔
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG US 1	E235.Br-L	29-Jan-2024	01-Feb-2024	28 days	3 days	✔	01-Feb-2024	28 days	3 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG DS 1	E235.Cl	29-Jan-2024	01-Feb-2024	28 days	3 days	✔	01-Feb-2024	28 days	3 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG US 1	E235.Cl	29-Jan-2024	01-Feb-2024	28 days	3 days	✔	01-Feb-2024	28 days	3 days	✔
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG DS 1	E235.F	29-Jan-2024	01-Feb-2024	28 days	3 days	✔	01-Feb-2024	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 : Fluoride in Water by IC											
HDPE WLNG US 1	E235.F	29-Jan-2024	01-Feb-2024	28 days	3 days	✓	01-Feb-2024	28 days	3 days	✓	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE WLNG DS 1	E235.NO3-L	29-Jan-2024	01-Feb-2024	3 days	3 days	✓	01-Feb-2024	3 days	3 days	✓	
Anions and Nutrients : Nitrate in Water by IC (Low Level)											
HDPE WLNG US 1	E235.NO3-L	29-Jan-2024	01-Feb-2024	3 days	3 days	✓	01-Feb-2024	3 days	3 days	✓	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE WLNG DS 1	E235.NO2-L	29-Jan-2024	01-Feb-2024	3 days	3 days	✓	01-Feb-2024	3 days	3 days	✓	
Anions and Nutrients : Nitrite in Water by IC (Low Level)											
HDPE WLNG US 1	E235.NO2-L	29-Jan-2024	01-Feb-2024	3 days	3 days	✓	01-Feb-2024	3 days	3 days	✓	
Anions and Nutrients : Sulfate in Water by IC											
HDPE WLNG DS 1	E235.SO4	29-Jan-2024	01-Feb-2024	28 days	3 days	✓	01-Feb-2024	28 days	3 days	✓	
Anions and Nutrients : Sulfate in Water by IC											
HDPE WLNG US 1	E235.SO4	29-Jan-2024	01-Feb-2024	28 days	3 days	✓	01-Feb-2024	28 days	3 days	✓	
Anions and Nutrients : Total Nitrogen by Colourimetry											
Amber glass total (sulfuric acid) WLNG DS 1	E366	29-Jan-2024	01-Feb-2024	28 days	3 days	✓	05-Feb-2024	28 days	7 days	✓	
Anions and Nutrients : Total Nitrogen by Colourimetry											
Amber glass total (sulfuric acid) WLNG US 1	E366	29-Jan-2024	01-Feb-2024	28 days	3 days	✓	05-Feb-2024	28 days	7 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		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) WLNG DS 1	E372-U	29-Jan-2024	01-Feb-2024	28 days	3 days	✓	05-Feb-2024	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) WLNG US 1	E372-U	29-Jan-2024	01-Feb-2024	28 days	3 days	✓	05-Feb-2024	28 days	7 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial - dissolved (lab preserved) WLNG DS 1	E509	29-Jan-2024	31-Jan-2024	28 days	2 days	✓	31-Jan-2024	28 days	0 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial - dissolved (lab preserved) WLNG US 1	E509	29-Jan-2024	31-Jan-2024	28 days	2 days	✓	31-Jan-2024	28 days	0 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) WLNG DS 1	E421	29-Jan-2024	31-Jan-2024	180 days	2 days	✓	01-Feb-2024	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved) WLNG US 1	E421	29-Jan-2024	31-Jan-2024	180 days	2 days	✓	01-Feb-2024	180 days	3 days	✓
Field Tests : Field pH,EC,Salinity,Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial - total (lab preserved) WLNG DS 1	EF001	29-Jan-2024	----	----	----		30-Jan-2024	----	1 days	
Field Tests : Field pH,EC,Salinity,Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial - total (lab preserved) WLNG US 1	EF001	29-Jan-2024	----	----	----		30-Jan-2024	----	1 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WLNG DS 1	E358-L	29-Jan-2024	01-Feb-2024	28 days	3 days	✓	01-Feb-2024	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) WLNG US 1	E358-L	29-Jan-2024	01-Feb-2024	28 days	3 days	✓	01-Feb-2024	28 days	3 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) WLNG DS 1	E355-L	29-Jan-2024	01-Feb-2024	28 days	3 days	✓	01-Feb-2024	28 days	3 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid) WLNG US 1	E355-L	29-Jan-2024	01-Feb-2024	28 days	3 days	✓	01-Feb-2024	28 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG DS 1	E290	29-Jan-2024	01-Feb-2024	14 days	3 days	✓	01-Feb-2024	14 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG US 1	E290	29-Jan-2024	01-Feb-2024	14 days	3 days	✓	01-Feb-2024	14 days	3 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG DS 1	E162	29-Jan-2024	----	----	----		01-Feb-2024	7 days	4 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG US 1	E162	29-Jan-2024	----	----	----		01-Feb-2024	7 days	4 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG DS 1	E160	29-Jan-2024	----	----	----		01-Feb-2024	7 days	4 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG US 1	E160	29-Jan-2024	----	----	----		01-Feb-2024	7 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	
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
UV-inhibited HDPE - dissolved (sodium hydroxide) WLNG DS 1	E532A	29-Jan-2024	----	----	----		30-Jan-2024	28 days	1 days	✓
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
UV-inhibited HDPE - dissolved (sodium hydroxide) WLNG US 1	E532A	29-Jan-2024	----	----	----		30-Jan-2024	28 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
UV-inhibited HDPE - total (sodium hydroxide) WLNG DS 1	E532	29-Jan-2024	----	----	----		30-Jan-2024	28 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
UV-inhibited HDPE - total (sodium hydroxide) WLNG US 1	E532	29-Jan-2024	----	----	----		30-Jan-2024	28 days	1 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial - total (lab preserved) WLNG DS 1	E508	29-Jan-2024	31-Jan-2024	28 days	2 days	✓	31-Jan-2024	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial - total (lab preserved) WLNG US 1	E508	29-Jan-2024	31-Jan-2024	28 days	2 days	✓	31-Jan-2024	28 days	0 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) WLNG DS 1	E420	29-Jan-2024	31-Jan-2024	180 days	2 days	✓	01-Feb-2024	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved) WLNG US 1	E420	29-Jan-2024	31-Jan-2024	180 days	2 days	✓	01-Feb-2024	180 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG DS 1	E395	29-Jan-2024	----	----	----		03-Feb-2024	7 days	5 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG US 1	E395	29-Jan-2024	----	----	----		03-Feb-2024	7 days	5 days	✔

Legend & Qualifier Definitions

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



Quality Control Parameter Frequency Compliance

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

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

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1319348	1	19	5.2	5.0	✓
Ammonia by Fluorescence	E298	1320460	1	19	5.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1319345	1	8	12.5	5.0	✓
Chloride in Water by IC	E235.Cl	1319341	1	20	5.0	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	1317706	1	9	11.1	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1318531	1	17	5.8	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1316592	1	16	6.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1320461	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	1319344	1	13	7.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1319342	1	13	7.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1319343	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1319340	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1320580	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1317705	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1317980	1	16	6.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1316583	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1320458	1	14	7.1	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1320457	1	19	5.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1320459	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1322039	1	2	50.0	5.0	✓
TSS by Gravimetry	E160	1320586	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1319348	1	19	5.2	5.0	✓
Ammonia by Fluorescence	E298	1320460	1	19	5.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1319345	1	8	12.5	5.0	✓
Chloride in Water by IC	E235.Cl	1319341	1	20	5.0	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	1317706	1	9	11.1	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1318531	1	17	5.8	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1316592	1	16	6.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1320461	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	1319344	1	13	7.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1319342	1	13	7.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1319343	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1319340	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1320580	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1317705	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							
Total Mercury in Water by CVAAS	E508	1317980	1	16	6.2	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1316583	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1320458	1	14	7.1	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1320457	1	19	5.2	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1320459	1	10	10.0	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1322039	1	2	50.0	5.0	✔
TSS by Gravimetry	E160	1320586	1	20	5.0	5.0	✔
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1319348	1	19	5.2	5.0	✔
Ammonia by Fluorescence	E298	1320460	1	19	5.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1319345	1	8	12.5	5.0	✔
Chloride in Water by IC	E235.Cl	1319341	1	20	5.0	5.0	✔
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	1317706	1	9	11.1	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1318531	1	17	5.8	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1316592	1	16	6.2	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1320461	1	19	5.2	5.0	✔
Fluoride in Water by IC	E235.F	1319344	1	13	7.6	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1319342	1	13	7.6	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1319343	1	13	7.6	5.0	✔
Sulfate in Water by IC	E235.SO4	1319340	1	18	5.5	5.0	✔
TDS by Gravimetry	E162	1320580	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1317705	1	18	5.5	5.0	✔
Total Mercury in Water by CVAAS	E508	1317980	1	16	6.2	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1316583	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1320458	1	14	7.1	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1320457	1	19	5.2	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1320459	1	10	10.0	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1322039	1	2	50.0	5.0	✔
TSS by Gravimetry	E160	1320586	1	20	5.0	5.0	✔
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1320460	1	19	5.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1319345	1	8	12.5	5.0	✔
Chloride in Water by IC	E235.Cl	1319341	1	20	5.0	5.0	✔
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	1317706	1	9	11.1	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1318531	1	17	5.8	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1316592	1	16	6.2	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1320461	1	19	5.2	5.0	✔
Fluoride in Water by IC	E235.F	1319344	1	13	7.6	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1319342	1	13	7.6	5.0	✔



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

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
Matrix Spikes (MS) - Continued							
Nitrite in Water by IC (Low Level)	E235.NO2-L	1319343	1	13	7.6	5.0	✔
Sulfate in Water by IC	E235.SO4	1319340	1	18	5.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1317705	1	18	5.5	5.0	✔
Total Mercury in Water by CVAAS	E508	1317980	1	16	6.2	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1316583	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1320458	1	14	7.1	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1320457	1	19	5.2	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1320459	0	10	0.0	5.0	✖
Total Sulfide by Colourimetry (Automated Flow)	E395	1322039	1	2	50.0	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)
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO ₂ . NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of total carbon (TC) is comprised of IC (which is common), this method is more accurate and more reliable than the TOC by subtraction method (i.e. TC minus TIC).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of 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



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
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.
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A ALS Environmental - Vancouver	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. sample pretreatment involved field or lab filtration following by sample preservation.
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.
Dissolved Trivalent Chromium (Cr III) by Calculation	EC535A ALS Environmental - Vancouver	Water	APHA 3030B/6020A/EPA 7196A (mod)	Dissolved Chromium (III) is calculated as the difference between Dissolved Chromium and Dissolved Hexavalent Chromium (Cr VI) results. The Limit of Reporting for Chromium (III) varies as a function of the test results.
Field pH,EC,Salinity,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,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.



<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Vancouver	Water		Preparation for Total Organic Carbon by Combustion
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Nitrogen in water	EP366 ALS Environmental - Vancouver	Water	APHA 4500-P J (mod)	Samples for total nitrogen analysis are digested using a heated persulfate digestion. Nitrogen compounds are converted to nitrate in this digestion.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with 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

<p>Work Order : VA24A1677</p> <p>Client : Triton Environmental Consultants Ltd.</p> <p>Contact : Miranda Lewis</p> <p>Address : Suite 1730, 1111 West Georgia St Vancouver BC Canada V6E 4M3</p> <p>Telephone :</p> <p>Project : 11964</p> <p>PO : 11964 - Task 20 - Phase 3C-4C</p> <p>C-O-C number : ----</p> <p>Sampler : Aegean, Olivia 604 631 2213</p> <p>Site : Water Analysis</p> <p>Quote number : VA23-TRIT100-012</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 : Can Dang</p> <p>Address : 8081 Lougheed Highway Burnaby, British Columbia Canada V5A 1W9</p> <p>Telephone : +1 604 253 4188</p> <p>Date Samples Received : 29-Jan-2024 17:20</p> <p>Date Analysis Commenced : 30-Jan-2024</p> <p>Issue Date : 05-Feb-2024 16:45</p>
--	--

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>
Angelo Salandanan	Lab Assistant	Vancouver Metals, Burnaby, British Columbia
Cindy Tang	Team Leader - Inorganics	Vancouver Inorganics, Burnaby, British Columbia
Ilnaz Badbezanchi	Supervisor - Metals Prep & Mercury	Vancouver Metals, Burnaby, British Columbia
Kevin Duarte	Supervisor - Metals ICP Instrumentation	Vancouver Metals, Burnaby, British Columbia
Kim Jensen	Department Manager - Metals	Vancouver Inorganics, Burnaby, British Columbia
Owen Cheng		Vancouver Metals, Burnaby, British Columbia
Paolo Obillo	Account Manager Assistant	Vancouver Administration, Burnaby, British Columbia
Sam Silveira	Lab Assistant	Vancouver Metals, Burnaby, British Columbia



General Comments

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

Key :

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

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

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

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

Workorder Comments

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1319348)											
VA24A1672-002	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1320580)											
FJ2400244-008	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	1440	1460	1.52%	20%	----
Physical Tests (QC Lot: 1320586)											
VA24A1677-001	WLNG DS 1	Solids, total suspended [TSS]	----	E160	3.0	mg/L	4.6	4.4	0.2	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1319340)											
VA24A1677-001	WLNG DS 1	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	2.37	2.40	0.02	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1319341)											
VA24A1677-001	WLNG DS 1	Chloride	16887-00-6	E235.Cl	0.50	mg/L	0.57	0.58	0.006	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1319342)											
VA24A1677-001	WLNG DS 1	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0908	0.0918	1.06%	20%	----
Anions and Nutrients (QC Lot: 1319343)											
VA24A1677-001	WLNG DS 1	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0013	0.0010	0.0003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1319344)											
VA24A1677-001	WLNG DS 1	Fluoride	16984-48-8	E235.F	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1319345)											
VA24A1677-001	WLNG DS 1	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1320458)											
FJ2400217-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.316	0.313	1.05%	20%	----
Anions and Nutrients (QC Lot: 1320459)											
FJ2400217-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0121	0.0121	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1320460)											
FJ2400217-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0968	0.0952	1.63%	20%	----
Organic / Inorganic Carbon (QC Lot: 1320457)											
FJ2400217-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	2.21	2.28	0.08	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1320461)											
FJ2400217-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	2.62	2.89	0.27	Diff <2x LOR	----
Total Sulfides (QC Lot: 1322039)											
VA24A1677-001	WLNG DS 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: 1316583)											



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: 1316583) - continued											
VA24A1672-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.121	0.122	0.616%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00062	0.00062	0.000002	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00223	0.00228	2.33%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.146	0.143	1.86%	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	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	1.06	1.06	0.409%	20%	----
		Cadmium, total	7440-43-9	E420	0.0000100	mg/L	0.0000143	0.0000196	0.0000053	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	80.4	82.9	3.06%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000088	0.000089	0.000001	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	0.00506	0.00509	0.577%	20%	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00228	0.00230	0.900%	20%	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00231	0.00230	0.000007	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	9.05	9.18	1.48%	20%	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.00114	0.00114	0.248%	20%	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0037	0.0038	0.0001	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	13.4	13.6	1.91%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.628	0.631	0.442%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.00134	0.00133	0.617%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00499	0.00495	0.00004	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	24.8	24.5	1.08%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.0160	0.0156	2.04%	20%	----
		Selenium, total	7782-49-2	E420	0.000100	mg/L	0.000194	0.000230	0.000036	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	5.88	6.04	2.78%	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	63.6	65.1	2.36%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.418	0.420	0.590%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	7.84	8.05	2.58%	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	0.00033	0.00034	0.0000006	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.0100	mg/L	<0.0100	<0.0100	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: 1316583) - continued											
VA24A1672-001	Anonymous	Tungsten, total	7440-33-7	E420	0.00010	mg/L	0.00025	0.00026	0.000005	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000205	0.000215	4.92%	20%	----
		Vanadium, total	7440-62-2	E420	0.00100	mg/L	0.00164	0.00163	0.000008	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0160	0.0161	0.000008	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	0.00064	0.00062	0.000001	Diff <2x LOR	----
Total Metals (QC Lot: 1317980)											
KS2400270-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1316592)											
VA24A1672-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.108	0.108	0.0746%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00058	0.00058	0.0000006	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00218	0.00220	0.807%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.151	0.150	0.912%	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	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	1.07	1.08	1.48%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000100	mg/L	0.0000114	0.0000111	0.0000003	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	79.2	79.9	0.818%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000085	0.000088	0.000003	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	0.00483	0.00494	0.00012	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00215	0.00218	1.12%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00194	0.00196	0.00001	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	8.88	8.87	0.109%	20%	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000954	0.000955	0.197%	20%	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0035	0.0036	0.00003	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	13.6	13.5	1.36%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.624	0.644	3.09%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00130	0.00123	5.45%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00472	0.00469	0.00004	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.300	mg/L	<0.300	<0.300	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	24.4	24.5	0.616%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.0152	0.0155	1.37%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000100	mg/L	0.000205	0.000207	0.000003	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	5.87	5.92	0.948%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1316592) - continued											
VA24A1672-001	Anonymous	Sodium, dissolved	7440-23-5	E421	0.050	mg/L	64.1	64.2	0.0821%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.406	0.403	0.726%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	7.34	7.46	1.59%	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	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	0.00032	0.00033	0.000009	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.0100	mg/L	<0.0100	<0.0100	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	0.00027	0.00026	0.00001	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.00010	mg/L	0.000193	0.000201	4.08%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00100	mg/L	0.00152	0.00146	0.00006	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0111	0.0112	0.982%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	0.00064	0.00065	0.000008	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1318531)											
VA24A1634-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1317705)											
KS2400258-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	0.00114	0.00114	0.000004	Diff <2x LOR	----
Speciated Metals (QC Lot: 1317706)											
VA24A1591-001	Anonymous	Chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	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: 1319348)						
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	<1.0	---
Physical Tests (QCLot: 1320580)						
Solids, total dissolved [TDS]	---	E162	10	mg/L	<10	---
Physical Tests (QCLot: 1320586)						
Solids, total suspended [TSS]	---	E160	3	mg/L	<3.0	---
Anions and Nutrients (QCLot: 1319340)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	---
Anions and Nutrients (QCLot: 1319341)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	---
Anions and Nutrients (QCLot: 1319342)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	---
Anions and Nutrients (QCLot: 1319343)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	---
Anions and Nutrients (QCLot: 1319344)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	---
Anions and Nutrients (QCLot: 1319345)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	---
Anions and Nutrients (QCLot: 1320458)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	---
Anions and Nutrients (QCLot: 1320459)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	---
Anions and Nutrients (QCLot: 1320460)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	---
Organic / Inorganic Carbon (QCLot: 1320457)						
Carbon, total organic [TOC]	---	E355-L	0.5	mg/L	<0.50	---
Organic / Inorganic Carbon (QCLot: 1320461)						
Carbon, dissolved organic [DOC]	---	E358-L	0.5	mg/L	<0.50	---
Total Sulfides (QCLot: 1322039)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	---
Total Metals (QCLot: 1316583)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	---
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	---



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1316583) - continued						
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1316583) - continued						
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	---
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	---
Total Metals (QCLot: 1317980)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	---
Dissolved Metals (QCLot: 1316592)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	---
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	---
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	---
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	---
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	---
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	---
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	---
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	---
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	---
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	---
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	---
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	---
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	---
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	---
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	---
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	---
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	---
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	---
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	---
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	---
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	---
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	---
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	---
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	---
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	---
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	---
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	---
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	---
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	---
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	---



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1316592) - continued						
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1318531)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1317705)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Speciated Metals (QCLot: 1317706)						
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	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				
Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Physical Tests (QCLot: 1319348)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	110	85.0	115	----
Physical Tests (QCLot: 1320580)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	108	85.0	115	----
Physical Tests (QCLot: 1320586)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	98.2	85.0	115	----
Anions and Nutrients (QCLot: 1319340)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1319341)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.1	90.0	110	----
Anions and Nutrients (QCLot: 1319342)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	99.1	90.0	110	----
Anions and Nutrients (QCLot: 1319343)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	97.9	90.0	110	----
Anions and Nutrients (QCLot: 1319344)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1319345)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	97.7	85.0	115	----
Anions and Nutrients (QCLot: 1320458)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	98.2	75.0	125	----
Anions and Nutrients (QCLot: 1320459)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	87.0	80.0	120	----
Anions and Nutrients (QCLot: 1320460)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.4	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1320457)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	96.0	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1320461)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	106	80.0	120	----
Total Sulfides (QCLot: 1322039)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	98.3	80.0	120	----



Sub-Matrix: **Water**

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Total Metals (QCLot: 1316583)									
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	106	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	98.9	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	103	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	107	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	101	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	103	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	102	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	102	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	106	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	104	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	102	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	106	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	110	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	106	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	104	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	103	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	104	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	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	97.3	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	109	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	100	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	92.7	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	103	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	101	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	99.6	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	106	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1316583) - continued									
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	106	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	103	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	103	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	100	80.0	120	----
Total Metals (QCLot: 1317980)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0.0001 mg/L	98.8	80.0	120	----
Dissolved Metals (QCLot: 1316592)									
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	103	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	99.3	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	103	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	96.3	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	95.6	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	100	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	102	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	100	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	97.9	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	110	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	99.0	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	106	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	103	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	108	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	100	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	100	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	103	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	97.2	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	109	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	99.8	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1316592) - continued									
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	85.6	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	110	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	97.6	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	93.4	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	100	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	103	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	109	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0.0001 mg/L	101	80.0	120	----
Speciated Metals (QCLot: 1317705)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Speciated Metals (QCLot: 1317706)									
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0005	mg/L	0.25 mg/L	104	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: 1319340)										
VA24A1677-002	WLNG US 1	Sulfate (as SO4)	14808-79-8	E235.SO4	103 mg/L	100 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1319341)										
VA24A1677-002	WLNG US 1	Chloride	16887-00-6	E235.Cl	102 mg/L	100 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1319342)										
VA24A1677-002	WLNG US 1	Nitrate (as N)	14797-55-8	E235.NO3-L	2.53 mg/L	2.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1319343)										
VA24A1677-002	WLNG US 1	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: 1319344)										
VA24A1677-002	WLNG US 1	Fluoride	16984-48-8	E235.F	1.03 mg/L	1 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1319345)										
VA24A1677-002	WLNG US 1	Bromide	24959-67-9	E235.Br-L	0.504 mg/L	0.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1320458)										
FJ2400217-002	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	0.4 mg/L	ND	70.0	130	----
Anions and Nutrients (QCLot: 1320460)										
FJ2400217-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0965 mg/L	----	N/A	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1320457)										
FJ2400217-002	Anonymous	Carbon, total organic [TOC]	----	E355-L	ND mg/L	5 mg/L	ND	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1320461)										
FJ2400217-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.95 mg/L	5 mg/L	98.9	70.0	130	----
Total Sulfides (QCLot: 1322039)										
VA24A1677-002	WLNG US 1	Sulfide, total (as S)	18496-25-8	E395	0.191 mg/L	0.2 mg/L	95.6	75.0	125	----
Total Metals (QCLot: 1316583)										
VA24A1672-002	Anonymous	Aluminum, total	7429-90-5	E420	0.187 mg/L	0.2 mg/L	93.4	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0194 mg/L	0.02 mg/L	96.8	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0191 mg/L	0.02 mg/L	95.6	70.0	130	----
		Barium, total	7440-39-3	E420	0.0191 mg/L	0.02 mg/L	95.4	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0400 mg/L	0.04 mg/L	100.0	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00983 mg/L	0.01 mg/L	98.3	70.0	130	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1316583) - continued										
VA24A1672-002	Anonymous	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	0.00396 mg/L	0.004 mg/L	99.0	70.0	130	----
		Calcium, total	7440-70-2	E420	4.01 mg/L	4 mg/L	100	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00992 mg/L	0.01 mg/L	99.2	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0406 mg/L	0.04 mg/L	102	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0200 mg/L	0.02 mg/L	99.8	70.0	130	----
		Copper, total	7440-50-8	E420	0.0196 mg/L	0.02 mg/L	98.2	70.0	130	----
		Iron, total	7439-89-6	E420	1.94 mg/L	2 mg/L	97.3	70.0	130	----
		Lead, total	7439-92-1	E420	0.0198 mg/L	0.02 mg/L	98.8	70.0	130	----
		Lithium, total	7439-93-2	E420	0.105 mg/L	0.1 mg/L	105	70.0	130	----
		Magnesium, total	7439-95-4	E420	0.971 mg/L	1 mg/L	97.1	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0195 mg/L	0.02 mg/L	97.7	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0209 mg/L	0.02 mg/L	105	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0419 mg/L	0.04 mg/L	105	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.12 mg/L	10 mg/L	91.2	70.0	130	----
		Potassium, total	7440-09-7	E420	3.92 mg/L	4 mg/L	98.0	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0197 mg/L	0.02 mg/L	98.4	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0384 mg/L	0.04 mg/L	96.0	70.0	130	----
		Silicon, total	7440-21-3	E420	9.68 mg/L	10 mg/L	96.8	70.0	130	----
		Silver, total	7440-22-4	E420	0.00391 mg/L	0.004 mg/L	97.8	70.0	130	----
		Sodium, total	7440-23-5	E420	2.08 mg/L	2 mg/L	104	70.0	130	----
		Strontium, total	7440-24-6	E420	0.0195 mg/L	0.02 mg/L	97.6	70.0	130	----
		Sulfur, total	7704-34-9	E420	20.2 mg/L	20 mg/L	101	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0383 mg/L	0.04 mg/L	95.8	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00383 mg/L	0.004 mg/L	95.8	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0180 mg/L	0.02 mg/L	90.1	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	0.0393 mg/L	0.04 mg/L	98.2	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0193 mg/L	0.02 mg/L	96.5	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00387 mg/L	0.004 mg/L	96.6	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0988 mg/L	0.1 mg/L	98.8	70.0	130	----
		Zinc, total	7440-66-6	E420	0.406 mg/L	0.4 mg/L	101	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0418 mg/L	0.04 mg/L	104	70.0	130	----
Total Metals (QCLot: 1317980)										
KS2400271-001	Anonymous	Mercury, total	7439-97-6	E508	0.000104 mg/L	0.0001 mg/L	104	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: 1316592)										
VA24A1672-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.193 mg/L	0.2 mg/L	96.4	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0195 mg/L	0.02 mg/L	97.7	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0199 mg/L	0.02 mg/L	99.4	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0197 mg/L	0.02 mg/L	98.6	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0380 mg/L	0.04 mg/L	95.1	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00966 mg/L	0.01 mg/L	96.6	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.096 mg/L	0.1 mg/L	96.3	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00399 mg/L	0.004 mg/L	99.8	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	3.82 mg/L	4 mg/L	95.5	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00978 mg/L	0.01 mg/L	97.8	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0404 mg/L	0.04 mg/L	101	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0200 mg/L	0.02 mg/L	99.9	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0199 mg/L	0.02 mg/L	99.4	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.95 mg/L	2 mg/L	97.5	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	0.0963 mg/L	0.1 mg/L	96.3	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	0.990 mg/L	1 mg/L	99.0	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0196 mg/L	0.02 mg/L	98.0	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0207 mg/L	0.02 mg/L	104	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0404 mg/L	0.04 mg/L	101	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	9.63 mg/L	10 mg/L	96.3	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	4.05 mg/L	4 mg/L	101	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0199 mg/L	0.02 mg/L	99.6	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0393 mg/L	0.04 mg/L	98.2	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.86 mg/L	10 mg/L	98.6	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00394 mg/L	0.004 mg/L	98.6	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	2.08 mg/L	2 mg/L	104	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	0.0198 mg/L	0.02 mg/L	98.8	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	19.6 mg/L	20 mg/L	97.8	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0414 mg/L	0.04 mg/L	104	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00385 mg/L	0.004 mg/L	96.2	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0176 mg/L	0.02 mg/L	88.0	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0200 mg/L	0.02 mg/L	99.9	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0398 mg/L	0.04 mg/L	99.6	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0194 mg/L	0.02 mg/L	97.0	70.0	130	----



Sub-Matrix: **Water**

					<i>Matrix Spike (MS) Report</i>					
					<i>Spike</i>		<i>Recovery (%)</i>	<i>Recovery Limits (%)</i>		
<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>Concentration</i>	<i>Target</i>	<i>MS</i>	<i>Low</i>	<i>High</i>	<i>Qualifier</i>
Dissolved Metals (QCLot: 1316592) - continued										
VA24A1672-002	Anonymous	Uranium, dissolved	7440-61-1	E421	0.00387 mg/L	0.004 mg/L	96.8	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0992 mg/L	0.1 mg/L	99.2	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.417 mg/L	0.4 mg/L	104	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0412 mg/L	0.04 mg/L	103	70.0	130	----
Dissolved Metals (QCLot: 1318531)										
VA24A1649-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.000106 mg/L	0.0001 mg/L	106	70.0	130	----
Speciated Metals (QCLot: 1317705)										
KS2400259-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.262 mg/L	0.25 mg/L	105	70.0	130	----
Speciated Metals (QCLot: 1317706)										
VA24A1591-002	Anonymous	Chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.255 mg/L	0.25 mg/L	102	70.0	130	----

Report To		Report Format / Distribution			Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																																																													
Company: Triton Environmental		Select Report Format: <input type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																																																													
Contact: [Redacted]		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			PROPERTY (Business Day)		4 day [P4-20%] <input type="checkbox"/>		EMERGENCY		1 Business day [E1 - 100%] <input type="checkbox"/>																																																							
Phone: [Redacted]		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3-25%] <input type="checkbox"/>		2 day [P2-50%] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E2 - 200% (Laboratory opening fees may apply)] <input type="checkbox"/>																																																									
Street: [Redacted]		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			Date and Time Required for all E&P TATs:		dd-mmm-yy hh.mm																																																											
City/Province: Vancouver/BC		Email 1 or Fax [Redacted]			For tests that can not be performed according to the service level selected, you will be contacted.																																																													
Postal Code: V6E 4M3		Email 2 [Redacted]			<p align="center">Analysis Request</p> <p align="center">Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below</p> <table border="1"> <tr> <td>F</td><td></td><td></td><td></td><td></td><td></td><td></td><td>P</td><td>P</td><td></td><td></td><td>F/P</td><td>F</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></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><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>														F							P	P			F/P	F																																			
F																					P	P			F/P	F																																								
Invoice To		Select Invoice																																																																
Same as Report To <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Email 1 or Fax [Redacted]																																																																
Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Email 2 [Redacted]																																																																
Company:																																																																		
Contact:																																																																		
Project Information					Oil and Gas Required Fields (client use)																																																													
ALS Account # / Quote #: VA23-TRIT100-012		AFE/Cost Center:			PO#																																																													
Job #: 11964		Major/Minor Code:			Routing Code:																																																													
PO / AFE: 11964 - Task 20 - Phase 3C-4C		Requisitioner:																																																																
LSD:		Location:																																																																
ALS Lab Work Order # (lab use only): A1577		ALS Contact: Can Dang																																																																
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy) (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, TOC)	Total sulfide (as H ₂ S), Unionized Sulfide	Anions scan (Br, Cl, F, NO ₂ , NO ₃ , SO ₄)	General parameters (alkalinity)	DOC	Dissolved hexavalent and trivalent chromium	SAMPLES ON HOLD				Sample is hazardous (please provide further details)				NUMBER OF CONTAINERS																																								
	WLNK DS 1			29-Jan-24 10:25	Water	R	R	R	R	R	R	R	R	R	R	R	R							N	8																																									
	pH: 7.02 cond: 40 µS/cm temp: 7.7°C																																																																	
	WLNK US 1			29-Jan-24 09:48	Water	R	R	R	R	R	R	R	R	R	R	R	R							N	8																																									
	pH: 6.56 cond: 38 µS/cm temp: 9.1°C																																																																	
	Duplicate				Water	R	R	R	R	R	R	R	R	R	R	R	R							N	8																																									
	Field Blank				Water	R	R	R	R	R	R	R	R	R	R	R	R							N	8																																									
	Trip Blank				Water	R	R	R	R	R	R	R	R	R	R	R	R							N	5																																									
Drinking Water (DW) Samples (client use)					Special Instructions / Specify					own list below																																																								
Are samples taken from a Regulated DW System?					Environmental Division Vancouver Work Reference VA24A1677 Telephone: +1 604 253 4188					SAMPLE CONDITION AS RECEIVED (lab use only) Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/> Cooling Initiated <input type="checkbox"/>																																																								
Are samples for human consumption/ use?										INITIAL COOLER TEMPERATURES °C: [Blank] FINAL COOLER TEMPERATURES °C: 8																																																								
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO																																																																		
Triton project # 11964					INITIAL SHIPMENT RECEPTION (lab use only)					FINAL SHIPMENT RECEPTION (lab use only)																																																								
Release: [Redacted]					Time: 15:00 Received by: [Redacted] Date: [Redacted]					Time: [Redacted] Received by: [Redacted] Date: Jan 29 5:26 pm																																																								

 Eagle Mountain - Woodfibre Gas Pipeline Project Woodfibre Site Waste Discharge Approval AE-111973 Report	Reporting Week	Jan 29 th to Feb 4 th , 2024
	Report #	6
	Appendix	B

Receiving Environment Field Notes and Logs



FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2024-1-29-Chan-F3C92

Project Component:	Tunnel	Site Name:	Receiving Environment - Downstream of Discharge	
Inspection Date:	01/29/2024	Location:	WLNG	
Triton QP:	Aegean Chan	Latitude/Longitude:	49.6683	-123.247958
Temperature(c):	Low 8	Permit:	PE 110136	
Weather Conditions:	Heavy Rain	Ground Conditions:	Wet	

Observations

Time: 10:04:56 **Flow Volume (visual):** high

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	VOC/VPH	N/A	QA Samples: No
Nutrients	Yes	EPH, PAH, LEPH/HEPH	N/A	
DOC	Yes	Trout LC50	N/A	

Logger Maintenance

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

Photos



Photo: 1
Location: Downstream
Description: Downstream location - US View



Photo: 2
Location: Downstream
Description: Downstream location - Across View

Photos



Jan 29, 2024 at 10:07:26 AM
10U 482105 5501779 ±6.96m
EAS DS1 - DS View

Photo: 3
Location: Downstream
Description: Downstream location - DS View

ALS Environmental
Chain of Custody (COC) / Analytical Request Form
ATKIS ALS Laboratory (Lab COC)

Jan 29, 2024 at 11:36:07 AM
10U 481466 5501387 ±36.90m
Lab COC

ALS Sample # (Lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type
W1-01	cont: 40g/50m, temp: 7.7C	29-Jan-24	10:28	Water
W1-02	cont: 39g/50m, temp: 7.1C	29-Jan-24	01:49	Water
W1-03				
W1-04				
W1-05				
W1-06				
W1-07				
W1-08				
W1-09				
W1-10				
W1-11				
W1-12				
W1-13				
W1-14				
W1-15				
W1-16				
W1-17				
W1-18				
W1-19				
W1-20				

Drinking Water (DW) Samples? (check one)
 No
 Yes

Special Instructions / Remarks (Please refer to the report by clicking on the drop-down list below)

Received by: *[Signature]* Date: 15/24

INITIAL SHIPMENT RECEIPT (Lab use only)

Final Shipment Receipt (Lab use only)

Photo: 4
Location: Lab COC
Description: Lab COC



Sign Off

Report Prepared By: Aegean Chan

Report Reviewed: Yes

Report Reviewer: Miranda Lewis

Professional(s) of Record: N/A

Name:

Designation:

Designation Number:



FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2024-1-29-Chan-6023E

Project Component:	Tunnel	Site Name:	Receiving Environment - Upstream of Discharge
Inspection Date:	01/29/2024	Location:	WLNG
Triton QP:	Aegean Chan	Latitude/Longitude:	49.669455 -123.25087
Temperature(c):	Low 8 High 11	Permit:	PE 110136
Weather Conditions:	Heavy Rain	Ground Conditions:	Wet

Observations

Time: 09:28:16 **Flow Volume (visual):** high

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	VOC/VPH	N/A	QA Samples: No
Nutrients	Yes	EPH, PAH, LEPH/HEPH	N/A	
DOC	Yes	Trout LC50	N/A	

Logger Maintenance

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

Photos



Photo: 1
Location: Upstream
Description: Upstream location - US View



Photo: 2
Location: Upstream
Description: Upstream location - Across View

Photos



Photo: 3
Location: Upstream
Description: Upstream location - DS View

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	ALS Content	Can Cont.	Sampler	Date	Time	Sample Type
WJ 17.02	cont: 40.5km, temp: 7.7C				21-Jan-24	10:25	Water
WJ 18.56	cont: 39.5km, temp: 7.1C				21-Jan-24	01:49	Water

Photo: 4
Location: Lab COC
Description: Lab COC

Sign Off

Report Prepared By: Aegean Chan

Report Reviewed: Yes

Report Reviewer: Miranda Lewis

Professional(s) of Record: N/A

Name:

Designation:

Designation Number: