

## **APPENDIX B**

### **Water Quality Sample Results: June and September 2024**



Chain of Custody (COC) / Analytical  
Request Form

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here  
(lab use only)

COC Number: 17-875658

Page

Environmental Division  
Winnipeg  
Work Order Reference  
**WP2414770**



Telephone : +1 204 256 9720

Report To		Report Format / Distribution		Select Service Level Below - Contact your AM to	
Company:	Latitude Uranium Inc	Select Report Format:	<input checked="" 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
Contact:	Nancy Nomore	Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	4 day [P4-20%]	<input type="checkbox"/> 1 Business
Phone:	306-270-6761	<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		3 day [P3-25%]	<input type="checkbox"/> Same Day, V
Company address below will appear on the final report		Select Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	2 day [P2-50%]	<input type="checkbox"/> (Laboratory)
Street:	303-217 Queen St. W	Email 1 or Fax	nancy@athaeenergy.com	Date and Time Required for all E&P TATs:	
City/Province:	Toronto, ON	Email 2	pschoeman@apegeo-science.com	For tests that can not be performed according to the service level selected,	
Postal Code:	M5V 0R2	Email 3		Analysis 1	
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution		Indicate Filtered (F), Preserved (P) or Filtered	
Copy of Invoice with Report	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		
Company:		Email 1 or Fax	ap-lur@athaeenergy.com		
Contact:		Email 2	nancy@athaeenergy.com		
Project Information		Oil and Gas Required Fields (client use)			
ALS Account # / Quote #	LATITUDE URANIUM INC	AFE/Cost Center:	PO#		
Job #	ANG/LAK	Major/Minor Code:	Routing Code:		
PO / AFE:		Requisitioner:			
LSD:		Location:			
ALS Lab Work Order # (lab use only):		ALS Contact:	Sampler:		
			Edna Vabha		
			Chasity Flawie		
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	
	24-WT-01	10-JUN-24	13:08	WATER	
	24-WT-02	10-JUN-24	12:23	WATER	
	24-WT-03	10-JUN-24	12:44	WATER	
	24-WT-04	10-JUN-24	12:56	WATER	
	24-WT-05	10-JUN-24	14:13	WATER	
Drinking Water (DW) Samples <sup>1</sup> (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)		SAMPLE CONDITION AS RECEIVED (lab use only)	
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>	
Are samples for human consumption/ use? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>	
				Cooling Initiated <input type="checkbox"/>	
				INITIAL COOLER TEMPERATURES °C	
				3.2°C	
				FINAL COOLER TEMPERATURES °C	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)		FINAL SHIPMENT RECEPTION (lab use only)	
Released by:	Date:	Time:	Received by:	Date:	Time:
Clark Gavelin	June 6 10/24	14:47	NK	11/20/24	12:37

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2015 FRONT

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

CERTIFICATE OF ANALYSIS

Work Order	: WP2414770	Page	: 1 of 4
Client	: APEX Geoscience Ltd.	Laboratory	: ALS Environmental - Winnipeg
Contact	: Philo Schoeman	Account Manager	:
Address	: #100, 11450-160 Street NW Edmonton AB Canada T5M 3Y7	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg MB Canada R2J 3T4
Telephone	: 780-467-3532	Telephone	: +1 204 255 9720
Project	: ANGILAK	Date Samples Received	: 11-Jun-2024 12:37
PO	: ----	Date Analysis Commenced	: 11-Jun-2024
C-O-C number	: ----	Issue Date	: 19-Jun-2024 16:25
Sampler	: ----		
Site	: ----		
Quote number	: 2024 Analytical Testing		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

Signatories	Position	Laboratory Department
Camil Caraan		Organics, Winnipeg, Manitoba
Lee McTavish		Metals, Winnipeg, Manitoba
Oleksandr Busel		Inorganics, Winnipeg, Manitoba
Oleksandr Busel		Metals, Winnipeg, Manitoba
Rhovee Guevarra		Metals, Winnipeg, Manitoba
William Lake	Analyst	Microbiology, Winnipeg, Manitoba



## General Comments

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

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

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

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

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

Unit	Description
µS/cm	microsiemens per centimetre
mg/L	milligrams per litre
MPN/100mL	most probable number per hundred millilitres
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	24-WT-01	24-WT-02	24-WT-03	24-WT-04	24-WT-05
(Matrix: Water)										
					Client sampling date / time	10-Jun-2024 13:08	10-Jun-2024 12:23	10-Jun-2024 12:44	10-Jun-2024 12:56	10-Jun-2024 14:13
Analyte	CAS Number	Method/Lab	LOR	Unit	WP2414770-001	WP2414770-002	WP2414770-003	WP2414770-004	WP2414770-005	
					Result	Result	Result	Result	Result	
Physical Tests										
Conductivity	----	E100/WP	2.0	µS/cm	39.4	54.7	62.4	44.3	18.3	
pH	----	E108/WP	0.10	pH units	7.27	7.51	7.39	7.19	6.83	
Solids, total dissolved [TDS]	----	E162-L/WP	3.0	mg/L	38.3	32.0	54.6	27.9	8.1	
Solids, total suspended [TSS]	----	E160-L/WP	1.0	mg/L	13.8	11.3	1.4	2.8	3.4	
Microbiological Tests										
Coliforms, thermotolerant [fecal]	----	E010.FC/WP	1	MPN/100mL	<1	<1	<1	<1	<1	
Total Metals										
Aluminum, total	7429-90-5	E420/WP	0.0030	mg/L	0.302	0.0206	0.106	0.0378	0.0250	
Antimony, total	7440-36-0	E420/WP	0.00010	mg/L	<0.00010	Not Detected	Not Detected	<0.00010	<0.00010	
Arsenic, total	7440-38-2	E420/WP	0.00010	mg/L	0.00032	0.00013	0.00023	0.00016	<0.00010	
Barium, total	7440-39-3	E420/WP	0.00010	mg/L	0.103	0.0846	0.136	0.0694	0.0288	
Beryllium, total	7440-41-7	E420/WP	0.000020	mg/L	0.000041	<0.000020	0.000022	<0.000020	<0.000020	
Bismuth, total	7440-69-9	E420/WP	0.000050	mg/L	<0.000050	Not Detected	Not Detected	Not Detected	<0.000050	
Boron, total	7440-42-8	E420/WP	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	Not Detected	
Cadmium, total	7440-43-9	E420/WP	0.0000050	mg/L	0.000508	0.0000959	0.0000525	0.000155	0.000141	
Calcium, total	7440-70-2	E420/WP	0.050	mg/L	4.95	7.39	7.46	5.53	2.17	
Cesium, total	7440-46-2	E420/WP	0.000010	mg/L	0.000047	<0.000010	<0.000010	<0.000010	<0.000010	
Chromium, total	7440-47-3	E420/WP	0.00050	mg/L	0.00109	<0.00050	0.00064	<0.00050	<0.00050	
Cobalt, total	7440-48-4	E420/WP	0.00010	mg/L	0.00050	<0.00010	0.00028	<0.00010	<0.00010	
Copper, total	7440-50-8	E420/WP	0.00050	mg/L	0.00236	0.00070	0.00111	0.00109	<0.00050	
Iron, total	7439-89-6	E420/WP	0.010	mg/L	3.22	0.099	0.289	0.109	0.042	
Lead, total	7439-92-1	E420/WP	0.000050	mg/L	0.000342	<0.000050	0.000067	0.000092	<0.000050	
Lithium, total	7439-93-2	E420/WP	0.0010	mg/L	0.0019	0.0012	0.0022	0.0011	<0.0010	
Magnesium, total	7439-95-4	E420/WP	0.0050	mg/L	2.79	2.88	3.85	2.65	0.913	
Manganese, total	7439-96-5	E420/WP	0.00010	mg/L	0.0425	0.00612	0.0918	0.0307	0.0171	
Mercury, total	7439-97-6	E508/WP	0.0000050	mg/L	0.0000059	<0.0000050	0.0000054	<0.0000050	<0.0000050	
Molybdenum, total	7439-98-7	E420/WP	0.000050	mg/L	0.000082	0.000139	0.000151	0.000095	<0.000050	
Nickel, total	7440-02-0	E420/WP	0.00050	mg/L	0.00224	0.00056	0.00237	0.00107	0.00056	
Phosphorus, total	7723-14-0	E420/WP	0.050	mg/L	0.064	<0.050	<0.050	<0.050	<0.050	



Analytical Results

Sub-Matrix: Water					Client sample ID	24-WT-01	24-WT-02	24-WT-03	24-WT-04	24-WT-05
(Matrix: Water)										
Client sampling date / time					10-Jun-2024 13:08	10-Jun-2024 12:23	10-Jun-2024 12:44	10-Jun-2024 12:56	10-Jun-2024 14:13	
Analyte	CAS Number	Method/Lab	LOR	Unit	WP2414770-001	WP2414770-002	WP2414770-003	WP2414770-004	WP2414770-005	
					Result	Result	Result	Result	Result	
Total Metals										
Potassium, total	7440-09-7	E420/WP	0.050	mg/L	0.764	0.296	0.248	0.533	0.277	
Rubidium, total	7440-17-7	E420/WP	0.00020	mg/L	0.00147	0.00077	0.00053	0.00098	0.00056	
Selenium, total	7782-49-2	E420/WP	0.000050	mg/L	<0.000050	0.000058	<0.000050	<0.000050	<0.000050	
Silicon, total	7440-21-3	E420/WP	0.10	mg/L	0.81	0.40	2.59	0.76	0.21	
Silver, total	7440-22-4	E420/WP	0.000010	mg/L	<0.000010	Not Detected	Not Detected	<0.000010	Not Detected	
Sodium, total	7440-23-5	E420/WP	0.050	mg/L	1.01	0.602	1.06	0.757	0.342	
Strontium, total	7440-24-6	E420/WP	0.00020	mg/L	0.0611	0.0723	0.0917	0.0622	0.0296	
Sulfur, total	7704-34-9	E420/WP	0.50	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	
Tellurium, total	13494-80-9	E420/WP	0.00020	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	
Thallium, total	7440-28-0	E420/WP	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, total	7440-29-1	E420/WP	0.00010	mg/L	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, total	7440-31-5	E420/WP	0.00010	mg/L	0.00016	0.00051	<0.00010	0.00125	0.00019	
Titanium, total	7440-32-6	E420/WP	0.00030	mg/L	0.00906	0.00078	0.00188	0.00099	0.00052	
Tungsten, total	7440-33-7	E420/WP	0.00010	mg/L	<0.00010	Not Detected	Not Detected	Not Detected	Not Detected	
Uranium, total	7440-61-1	E420/WP	0.000010	mg/L	0.000200	0.000255	0.000141	0.000225	0.000033	
Vanadium, total	7440-62-2	E420/WP	0.00050	mg/L	0.00119	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, total	7440-66-6	E420/WP	0.0030	mg/L	0.0182	0.0392	0.0183	0.0534	0.0562	
Zirconium, total	7440-67-7	E420/WP	0.00020	mg/L	0.00046	<0.00020	0.00059	<0.00020	<0.00020	
Aggregate Organics										
Biochemical oxygen demand [BOD]	----	E550/WP	2.0	mg/L	<2.0	<2.0	3.1	2.9	<2.0	
Carbonaceous biochemical oxygen demand [CBOD]	----	E555/WP	2.0	mg/L	<2.0	<2.0	2.3	3.8	<2.0	
Oil & grease (gravimetric)	----	E567/WP	5.0	mg/L	10.0	8.6	7.6	7.7	7.1	

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

Work Order	: WP2414770	Page	: 1 of 11
Client	: APEX Geoscience Ltd.	Laboratory	: ALS Environmental - Winnipeg
Contact	: Philo Schoeman	Account Manager	:
Address	: #100, 11450-160 Street NW Edmonton AB Canada T5M 3Y7	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	: ----	Telephone	: +1 204 255 9720
Project	: ANGILAK	Date Samples Received	: 11-Jun-2024 12:37
PO	: ----	Issue Date	: 19-Jun-2024 16:21
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
Quote number	: 2024 Analytical Testing		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

### Key

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

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

**DQO:** Data Quality Objective.

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

**RPD:** Relative Percent Difference.

### **Workorder Comments**

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

### **Summary of Outliers**

#### **Outliers : Quality Control Samples**

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

#### **Outliers: Reference Material (RM) Samples**

- No Reference Material (RM) Sample outliers occur.

### ***Outliers : Analysis Holding Time Compliance (Breaches)***

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

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

- No Quality Control Sample Frequency Outliers occur.





## Analysis Holding Time Compliance

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

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

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

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

Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT 3d] 24-WT-01	E550	10-Jun-2024	----	----	----		12-Jun-2024	3 days	2 days	✔
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT 3d] 24-WT-02	E550	10-Jun-2024	----	----	----		12-Jun-2024	3 days	2 days	✔
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT 3d] 24-WT-03	E550	10-Jun-2024	----	----	----		12-Jun-2024	3 days	2 days	✔
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT 3d] 24-WT-04	E550	10-Jun-2024	----	----	----		12-Jun-2024	3 days	2 days	✔
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT 3d] 24-WT-05	E550	10-Jun-2024	----	----	----		12-Jun-2024	3 days	2 days	✔
Aggregate Organics : Biochemical Oxygen Demand (Carbonaceous) - 5 day										
HDPE [BOD HT 3d] 24-WT-01	E555	10-Jun-2024	----	----	----		12-Jun-2024	3 days	2 days	✔
Aggregate Organics : Biochemical Oxygen Demand (Carbonaceous) - 5 day										
HDPE [BOD HT 3d] 24-WT-02	E555	10-Jun-2024	----	----	----		12-Jun-2024	3 days	2 days	✔



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

Analyte Group : Analytical Method	Method	Sampling Date	Extraction / Preparation				Analysis			
Container / Client Sample ID(s)			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Aggregate Organics : Biochemical Oxygen Demand (Carbonaceous) - 5 day										
HDPE [BOD HT 3d] 24-WT-03	E555	10-Jun-2024	----	----	----		12-Jun-2024	3 days	2 days	✓
Aggregate Organics : Biochemical Oxygen Demand (Carbonaceous) - 5 day										
HDPE [BOD HT 3d] 24-WT-04	E555	10-Jun-2024	----	----	----		12-Jun-2024	3 days	2 days	✓
Aggregate Organics : Biochemical Oxygen Demand (Carbonaceous) - 5 day										
HDPE [BOD HT 3d] 24-WT-05	E555	10-Jun-2024	----	----	----		12-Jun-2024	3 days	2 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) 24-WT-01	E567	10-Jun-2024	14-Jun-2024	28 days	4 days	✓	14-Jun-2024	28 days	4 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) 24-WT-02	E567	10-Jun-2024	14-Jun-2024	28 days	4 days	✓	14-Jun-2024	28 days	4 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) 24-WT-03	E567	10-Jun-2024	14-Jun-2024	28 days	4 days	✓	14-Jun-2024	28 days	4 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) 24-WT-04	E567	10-Jun-2024	14-Jun-2024	28 days	4 days	✓	14-Jun-2024	28 days	4 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) 24-WT-05	E567	10-Jun-2024	14-Jun-2024	28 days	4 days	✓	14-Jun-2024	28 days	4 days	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (Enzyme Substrate)										
Sterile HDPE (Sodium thiosulphate) 24-WT-05	E010.FC	10-Jun-2024	----	----	----		11-Jun-2024	30 hrs	23 hrs	✓



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	
Microbiological Tests : Thermotolerant (Fecal) Coliform (Enzyme Substrate)										
Sterile HDPE (Sodium thiosulphate) 24-WT-01	E010.FC	10-Jun-2024	----	----	----		11-Jun-2024	30 hrs	24 hrs	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (Enzyme Substrate)										
Sterile HDPE (Sodium thiosulphate) 24-WT-02	E010.FC	10-Jun-2024	----	----	----		11-Jun-2024	30 hrs	25 hrs	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (Enzyme Substrate)										
Sterile HDPE (Sodium thiosulphate) 24-WT-03	E010.FC	10-Jun-2024	----	----	----		11-Jun-2024	30 hrs	25 hrs	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (Enzyme Substrate)										
Sterile HDPE (Sodium thiosulphate) 24-WT-04	E010.FC	10-Jun-2024	----	----	----		11-Jun-2024	30 hrs	25 hrs	✓
Physical Tests : Conductivity in Water										
HDPE 24-WT-01	E100	10-Jun-2024	12-Jun-2024	28 days	2 days	✓	12-Jun-2024	28 days	2 days	✓
Physical Tests : Conductivity in Water										
HDPE 24-WT-02	E100	10-Jun-2024	12-Jun-2024	28 days	2 days	✓	12-Jun-2024	28 days	2 days	✓
Physical Tests : Conductivity in Water										
HDPE 24-WT-03	E100	10-Jun-2024	13-Jun-2024	28 days	3 days	✓	13-Jun-2024	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE 24-WT-04	E100	10-Jun-2024	13-Jun-2024	28 days	3 days	✓	13-Jun-2024	28 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE 24-WT-05	E100	10-Jun-2024	13-Jun-2024	28 days	3 days	✓	13-Jun-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	
Physical Tests : pH by Meter										
HDPE 24-WT-01	E108	10-Jun-2024	12-Jun-2024	0.25 hrs	43 hrs	* EHTR-FM	12-Jun-2024	0.25 hrs	55 hrs	* EHTR-FM
Physical Tests : pH by Meter										
HDPE 24-WT-02	E108	10-Jun-2024	12-Jun-2024	0.25 hrs	44 hrs	* EHTR-FM	12-Jun-2024	0.25 hrs	56 hrs	* EHTR-FM
Physical Tests : pH by Meter										
HDPE 24-WT-05	E108	10-Jun-2024	13-Jun-2024	0.25 hrs	71 hrs	* EHTR-FM	13-Jun-2024	0.25 hrs	71 hrs	* EHTR-FM
Physical Tests : pH by Meter										
HDPE 24-WT-03	E108	10-Jun-2024	13-Jun-2024	0.25 hrs	73 hrs	* EHTR-FM	13-Jun-2024	0.25 hrs	73 hrs	* EHTR-FM
Physical Tests : pH by Meter										
HDPE 24-WT-04	E108	10-Jun-2024	13-Jun-2024	0.25 hrs	73 hrs	* EHTR-FM	13-Jun-2024	0.25 hrs	73 hrs	* EHTR-FM
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE 24-WT-01	E162-L	10-Jun-2024	----	----	----		12-Jun-2024	7 days	2 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE 24-WT-02	E162-L	10-Jun-2024	----	----	----		12-Jun-2024	7 days	2 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE 24-WT-03	E162-L	10-Jun-2024	----	----	----		12-Jun-2024	7 days	2 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE 24-WT-04	E162-L	10-Jun-2024	----	----	----		12-Jun-2024	7 days	2 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE 24-WT-05	E162-L	10-Jun-2024	----	----	----		12-Jun-2024	7 days	2 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] 24-WT-01	E160-L	10-Jun-2024	----	----	----		12-Jun-2024	7 days	2 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] 24-WT-02	E160-L	10-Jun-2024	----	----	----		12-Jun-2024	7 days	2 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] 24-WT-03	E160-L	10-Jun-2024	----	----	----		12-Jun-2024	7 days	2 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] 24-WT-04	E160-L	10-Jun-2024	----	----	----		12-Jun-2024	7 days	2 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [TSS-WB] 24-WT-05	E160-L	10-Jun-2024	----	----	----		12-Jun-2024	7 days	2 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) 24-WT-01	E508	10-Jun-2024	14-Jun-2024	28 days	4 days	✓	14-Jun-2024	28 days	4 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) 24-WT-02	E508	10-Jun-2024	14-Jun-2024	28 days	4 days	✓	14-Jun-2024	28 days	4 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) 24-WT-03	E508	10-Jun-2024	14-Jun-2024	28 days	4 days	✓	14-Jun-2024	28 days	4 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) 24-WT-04	E508	10-Jun-2024	14-Jun-2024	28 days	4 days	✓	14-Jun-2024	28 days	4 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) 24-WT-05	E508	10-Jun-2024	14-Jun-2024	28 days	4 days	✓	14-Jun-2024	28 days	4 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) 24-WT-01	E420	10-Jun-2024	17-Jun-2024	180 days	7 days	✓	17-Jun-2024	180 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) 24-WT-02	E420	10-Jun-2024	17-Jun-2024	180 days	7 days	✓	17-Jun-2024	180 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) 24-WT-03	E420	10-Jun-2024	17-Jun-2024	180 days	7 days	✓	17-Jun-2024	180 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) 24-WT-04	E420	10-Jun-2024	17-Jun-2024	180 days	7 days	✓	17-Jun-2024	180 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) 24-WT-05	E420	10-Jun-2024	17-Jun-2024	180 days	7 days	✓	17-Jun-2024	180 days	7 days	✓

**Legend & Qualifier Definitions**

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended  
 Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

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

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
<b>Laboratory Duplicates (DUP)</b>							
Biochemical Oxygen Demand - 5 day	E550	1490119	2	40	5.0	5.0	✔
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	1490120	1	20	5.0	5.0	✔
Conductivity in Water	E100	1491335	2	10	20.0	5.0	✔
pH by Meter	E108	1491334	2	22	9.0	5.0	✔
TDS by Gravimetry (Low Level)	E162-L	1488937	2	40	5.0	5.0	✔
Thermotolerant (Fecal) Coliform (Enzyme Substrate)	E010.FC	1487531	1	5	20.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1494005	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1497260	2	36	5.5	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	1488929	1	20	5.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Biochemical Oxygen Demand - 5 day	E550	1490119	2	40	5.0	5.0	✔
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	1490120	1	20	5.0	5.0	✔
Conductivity in Water	E100	1491335	2	10	20.0	5.0	✔
Oil & Grease by Gravimetry	E567	1492358	1	20	5.0	5.0	✔
pH by Meter	E108	1491334	2	22	9.0	5.0	✔
TDS by Gravimetry (Low Level)	E162-L	1488937	2	40	5.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1494005	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1497260	2	36	5.5	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	1488929	1	20	5.0	5.0	✔
<b>Method Blanks (MB)</b>							
Biochemical Oxygen Demand - 5 day	E550	1490119	2	40	5.0	5.0	✔
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	1490120	1	20	5.0	5.0	✔
Conductivity in Water	E100	1491335	2	10	20.0	5.0	✔
Oil & Grease by Gravimetry	E567	1492358	1	20	5.0	5.0	✔
TDS by Gravimetry (Low Level)	E162-L	1488937	2	40	5.0	5.0	✔
Thermotolerant (Fecal) Coliform (Enzyme Substrate)	E010.FC	1487531	1	5	20.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1494005	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1497260	2	36	5.5	5.0	✔
TSS by Gravimetry (Low Level)	E160-L	1488929	1	20	5.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
Total Mercury in Water by CVAAS	E508	1494005	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1497260	2	36	5.5	5.0	✔



## Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Thermotolerant (Fecal) Coliform (Enzyme Substrate)	E010.FC ALS Environmental - Winnipeg	Water	APHA 9223 (mod)	The enzyme substrate test detects Thermotolerant Coliforms in a 100 mL sample after an 18 hour incubation at $44.5 \pm 0.2^{\circ}\text{C}$ .
Conductivity in Water	E100 ALS Environmental - Winnipeg	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to $25^{\circ}\text{C}$ .
pH by Meter	E108 ALS Environmental - Winnipeg	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally $20 \pm 5^{\circ}\text{C}$ ). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry (Low Level)	E160-L ALS Environmental - Winnipeg	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 (Low Level)	E162-L ALS Environmental - Winnipeg	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.
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Winnipeg	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.
Total Mercury in Water by CVAAS	E508 ALS Environmental - Winnipeg	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Winnipeg	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter.  Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.





<i>Analytical Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555  ALS Environmental - Winnipeg	Water	APHA 5210 B (mod)	<p>Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Nitrification inhibitor is added to samples to prevent nitrogenous compounds from consuming oxygen resulting in only carbonaceous oxygen demand being reported by this method.</p> <p>Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.</p>
Oil & Grease by Gravimetry	E567  ALS Environmental - Winnipeg	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Oil & Grease Extraction for Gravimetry	EP567  ALS Environmental - Winnipeg	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.

QUALITY CONTROL REPORT

Work Order	: WP2414770	Page	: 1 of 17
Client	: APEX Geoscience Ltd.	Laboratory	: ALS Environmental - Winnipeg
Contact	: Philo Schoeman	Account Manager	:
Address	: 217 - 401 Queen Street West Toronto ON Canada M5V 0R2	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	: ----	Telephone	: +1 204 255 9720
Project	: ANGILAK	Date Samples Received	: 11-Jun-2024 12:37
PO	: ----	Date Analysis Commenced	: 11-Jun-2024
C-O-C number	: ----	Issue Date	: 19-Jun-2024 16:21
Sampler	: ----		
Site	: ----		
Quote number	: 2024 Analytical Testing		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	Position	Laboratory Department
Camil Caraan		Winnipeg Organics, Winnipeg, Manitoba
Lee McTavish		Winnipeg Metals, Winnipeg, Manitoba
Oleksandr Busel		Winnipeg Inorganics, Winnipeg, Manitoba
Oleksandr Busel		Winnipeg Metals, Winnipeg, Manitoba
Rhovee Guevarra		Winnipeg Metals, Winnipeg, Manitoba
William Lake	Analyst	Winnipeg Microbiology, Winnipeg, Manitoba



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## General Comments

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

### Key :

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

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

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

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

## Workorder Comments

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

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Laboratory Duplicate (DUP) Report

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

Sub-Matrix: 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: 1488929)											
WP2414772-006	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	11.6	10.6	9.04%	20%	----
Physical Tests (QC Lot: 1488937)											
WP2414710-001	Anonymous	Solids, total dissolved [TDS]	----	E162-L	15.0	mg/L	468	474	1.27%	20%	----
Physical Tests (QC Lot: 1488938)											
WP2414783-001	Anonymous	Solids, total dissolved [TDS]	----	E162-L	15.0	mg/L	523	531	1.61%	20%	----
Physical Tests (QC Lot: 1491334)											
WP2414770-002	24-WT-02	pH	----	E108	0.10	pH units	7.51	7.44	0.936%	4%	----
Physical Tests (QC Lot: 1491335)											
WP2414770-002	24-WT-02	Conductivity	----	E100	2.0	µS/cm	54.7	55.1	0.728%	10%	----
Physical Tests (QC Lot: 1494670)											
WP2414795-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	2730	2740	0.366%	10%	----
Physical Tests (QC Lot: 1494671)											
WP2414795-001	Anonymous	pH	----	E108	0.10	pH units	8.35	8.38	0.359%	4%	----
Microbiological Tests (QC Lot: 1487531)											
WP2414770-001	24-WT-01	Coliforms, thermotolerant [fecal]	----	E010.FC	1	MPN/100mL	<1	<1	0	Diff <2x LOR	----
Total Metals (QC Lot: 1494005)											
WP2414688-007	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	0.0000100	0.0000091	0.0000009	Diff <2x LOR	----
Total Metals (QC Lot: 1497260)											
WP2414291-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	173 µg/L	0.181	4.34%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.11 µg/L	0.00012	0.000008	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	2.06 µg/L	0.00206	0.0719%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	25.4 µg/L	0.0254	0.102%	20%	----
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.100 µg/L	<0.000100	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.050 µg/L	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	31 µg/L	0.031	0.0004	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0075 µg/L	0.0000074	0.0000002	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	27.8	27.8	0.356%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.039 µg/L	0.000039	0.0000002	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.50 µg/L	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.12 µg/L	0.00012	0.000003	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: 1497260) - continued											
WP2414291-001	Anonymous	Copper, total	7440-50-8	E420	0.00050	mg/L	1.72 µg/L	0.00172	0.000003	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	180 µg/L	0.178	0.977%	20%	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.098 µg/L	0.000093	0.000005	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0143	0.0136	5.22%	20%	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	15600 µg/L	15.6	0.204%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	11.4 µg/L	0.0113	0.769%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.802 µg/L	0.000765	4.78%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	1.55 µg/L	0.00153	0.00002	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	85 µg/L	0.094	0.009	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	3590 µg/L	3.53	1.67%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	1.79 µg/L	0.00188	0.00009	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.328 µg/L	0.000368	0.000040	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	3020 µg/L	2.95	2.27%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.010 µg/L	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	17800 µg/L	17.8	0.120%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	99.2 µg/L	0.0988	0.415%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	19900 µg/L	19.6	1.63%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.20 µg/L	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.010 µg/L	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.10 µg/L	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.10 µg/L	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	6.18 µg/L	0.00599	3.22%	20%	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.10 µg/L	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	1.27 µg/L	0.00130	2.67%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	1.95 µg/L	0.00195	0.000002	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<3.0 µg/L	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	0.22 µg/L	0.00020	0.00002	Diff <2x LOR	----
Total Metals (QC Lot: 1497264)											
WP2414770-005	24-WT-05	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0250	0.0243	0.0007	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	<0.00010	0.00011	0.000008	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0288	0.0287	0.324%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1497264) - continued											
WP2414770-005	24-WT-05	Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.000141	0.000132	6.57%	20%	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	2.17	2.13	1.91%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.042	0.043	0.002	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.913	0.915	0.174%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0171	0.0173	1.26%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00056	0.00058	0.00002	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	0.277	0.281	0.004	Diff <2x LOR	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00056	0.00062	0.00006	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	0.000059	0.000009	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	0.21	0.21	0.001	Diff <2x LOR	----
		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	0.342	0.343	0.0008	Diff <2x LOR	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0296	0.0275	7.07%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	0.00019	0.00019	0.000008	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00052	0.00051	0.000003	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000033	0.000034	0.000001	Diff <2x LOR	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0562	0.0565	0.528%	20%	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1490119)											



Sub-Matrix: <b>Water</b>					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Aggregate Organics (QC Lot: 1490119) - continued											
WP2414688-001	Anonymous	Biochemical oxygen demand [BOD]	----	E550	6.0	mg/L	<6.0	6.0	0.0%	30%	----
Aggregate Organics (QC Lot: 1490120)											
WP2414723-003	Anonymous	Carbonaceous biochemical oxygen demand [CBOD]	----	E555	2.0	mg/L	<2.0	<2.0	0.0%	30%	----
Aggregate Organics (QC Lot: 1490121)											
WP2414783-001	Anonymous	Biochemical oxygen demand [BOD]	----	E550	2.0	mg/L	2.0	<2.0	0.0%	30%	----



## Method Blank (MB) Report

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

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 1488929)</b>						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
<b>Physical Tests (QCLot: 1488937)</b>						
Solids, total dissolved [TDS]	----	E162-L	3	mg/L	<3.0	----
<b>Physical Tests (QCLot: 1488938)</b>						
Solids, total dissolved [TDS]	----	E162-L	3	mg/L	<3.0	----
<b>Physical Tests (QCLot: 1491335)</b>						
Conductivity	----	E100	1	µS/cm	<1.0	----
<b>Physical Tests (QCLot: 1494670)</b>						
Conductivity	----	E100	1	µS/cm	<1.0	----
<b>Microbiological Tests (QCLot: 1487531)</b>						
Coliforms, thermotolerant [fecal]	----	E010.FC	1	MPN/100mL	<1	----
<b>Total Metals (QCLot: 1494005)</b>						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
<b>Total Metals (QCLot: 1497260)</b>						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----





Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Total Metals (QCLot: 1497260) - continued</b>						
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
<b>Total Metals (QCLot: 1497264)</b>						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Total Metals (QCLot: 1497264) - continued</b>						
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
<b>Aggregate Organics (QCLot: 1490119)</b>						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
<b>Aggregate Organics (QCLot: 1490120)</b>						
Carbonaceous biochemical oxygen demand [CBOD]	----	E555	2	mg/L	<2.0	----
<b>Aggregate Organics (QCLot: 1490121)</b>						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
<b>Aggregate Organics (QCLot: 1492358)</b>						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----





Laboratory Control Sample (LCS) Report

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

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1488929)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	150 mg/L	91.1	85.0	115	----
Physical Tests (QCLot: 1488937)									
Solids, total dissolved [TDS]	----	E162-L	3	mg/L	1000 mg/L	93.0	85.0	115	----
Physical Tests (QCLot: 1488938)									
Solids, total dissolved [TDS]	----	E162-L	3	mg/L	1000 mg/L	94.8	85.0	115	----
Physical Tests (QCLot: 1491334)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Physical Tests (QCLot: 1491335)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	99.7	90.0	110	----
Physical Tests (QCLot: 1494670)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	101	90.0	110	----
Physical Tests (QCLot: 1494671)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Total Metals (QCLot: 1494005)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	99.9	80.0	120	----
Total Metals (QCLot: 1497260)									
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	99.1	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	99.6	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	101	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	99.7	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	100	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	98.7	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	99.9	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.8	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	100.0	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	98.3	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	98.5	80.0	120	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1497260) - continued									
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	101	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	107	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	99.0	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	99.8	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	101	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	99.4	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	92.2	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	98.2	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	92.7	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	104	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	98.6	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	105	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	98.6	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	98.0	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	99.4	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	97.2	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	98.9	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	98.5	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	100	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	100	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	99.2	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	93.7	80.0	120	----
Total Metals (QCLot: 1497264)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	101	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	100	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	99.4	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	100	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	99.2	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	99.6	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	97.4	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	100	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	99.5	80.0	120	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1497264) - continued									
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	97.2	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	97.1	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	94.8	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	96.7	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	97.7	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	105	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	99.6	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	102	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	96.6	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	109	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	99.3	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	100	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	91.7	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	101	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	92.7	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	98.1	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	101	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	107	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	95.4	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	96.5	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	98.0	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	98.0	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	97.4	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	97.6	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	97.5	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	100	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	97.5	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	96.2	80.0	120	----
Aggregate Organics (QCLot: 1490119)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	93.6	85.0	115	----
Aggregate Organics (QCLot: 1490120)									
Carbonaceous biochemical oxygen demand [CBOD]	----	E555	2	mg/L	198 mg/L	110	85.0	115	----
Aggregate Organics (QCLot: 1490121)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	108	85.0	115	----
Aggregate Organics (QCLot: 1492358)									



Sub-Matrix: <b>Water</b>					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Aggregate Organics (QCLot: 1492358) - continued									
Oil & grease (gravimetric)	----	E567	5	mg/L	100 mg/L	104	70.0	130	----



Matrix Spike (MS) Report

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

					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: 1494005)										
WP2414770-001	24-WT-01	Mercury, total	7439-97-6	E508	0.000100 mg/L	0 mg/L	100	70.0	130	----
Total Metals (QCLot: 1497260)										
WP2414291-001	Anonymous	Aluminum, total	7429-90-5	E420	0.221 mg/L	0.2 mg/L	111	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0195 mg/L	0.02 mg/L	97.5	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0217 mg/L	0.02 mg/L	109	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0431 mg/L	0.04 mg/L	108	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0103 mg/L	0.01 mg/L	103	70.0	130	----
		Boron, total	7440-42-8	E420	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00432 mg/L	0.004 mg/L	108	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0106 mg/L	0.01 mg/L	106	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0419 mg/L	0.04 mg/L	105	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Copper, total	7440-50-8	E420	0.0212 mg/L	0.02 mg/L	106	70.0	130	----
		Iron, total	7439-89-6	E420	2.15 mg/L	2 mg/L	107	70.0	130	----
		Lead, total	7439-92-1	E420	0.0199 mg/L	0.02 mg/L	99.6	70.0	130	----
		Lithium, total	7439-93-2	E420	0.107 mg/L	0.1 mg/L	107	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0205 mg/L	0.02 mg/L	102	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0195 mg/L	0.02 mg/L	97.5	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0417 mg/L	0.04 mg/L	104	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.9 mg/L	10 mg/L	109	70.0	130	----
		Potassium, total	7440-09-7	E420	3.98 mg/L	4 mg/L	99.6	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0213 mg/L	0.02 mg/L	106	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0430 mg/L	0.04 mg/L	108	70.0	130	----
		Silicon, total	7440-21-3	E420	9.54 mg/L	10 mg/L	95.4	70.0	130	----
		Silver, total	7440-22-4	E420	0.00402 mg/L	0.004 mg/L	100	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	21.4 mg/L	20 mg/L	107	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00403 mg/L	0.004 mg/L	101	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0213 mg/L	0.02 mg/L	106	70.0	130	----
		Tin, total	7440-31-5	E420	0.0197 mg/L	0.02 mg/L	98.3	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0408 mg/L	0.04 mg/L	102	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0197 mg/L	0.02 mg/L	98.5	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00413 mg/L	0.004 mg/L	103	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.107 mg/L	0.1 mg/L	107	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: 1497260) - continued										
WP2414291-001	Anonymous	Zinc, total	7440-66-6	E420	0.412 mg/L	0.4 mg/L	103	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0406 mg/L	0.04 mg/L	102	70.0	130	----
Total Metals (QCLot: 1497264)										
WP2414770-005	24-WT-05	Aluminum, total	7429-90-5	E420	0.210 mg/L	0.2 mg/L	105	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	0.0213 mg/L	0.02 mg/L	106	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0423 mg/L	0.04 mg/L	106	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0110 mg/L	0.01 mg/L	110	70.0	130	----
		Boron, total	7440-42-8	E420	0.100 mg/L	0.1 mg/L	99.8	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00412 mg/L	0.004 mg/L	103	70.0	130	----
		Calcium, total	7440-70-2	E420	4.05 mg/L	4 mg/L	101	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0105 mg/L	0.01 mg/L	105	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0413 mg/L	0.04 mg/L	103	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0203 mg/L	0.02 mg/L	101	70.0	130	----
		Copper, total	7440-50-8	E420	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Iron, total	7439-89-6	E420	2.08 mg/L	2 mg/L	104	70.0	130	----
		Lead, total	7439-92-1	E420	0.0209 mg/L	0.02 mg/L	104	70.0	130	----
		Lithium, total	7439-93-2	E420	0.100 mg/L	0.1 mg/L	100	70.0	130	----
		Magnesium, total	7439-95-4	E420	1.01 mg/L	1 mg/L	101	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0191 mg/L	0.02 mg/L	95.3	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0409 mg/L	0.04 mg/L	102	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.4 mg/L	10 mg/L	104	70.0	130	----
		Potassium, total	7440-09-7	E420	4.29 mg/L	4 mg/L	107	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0215 mg/L	0.02 mg/L	108	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0384 mg/L	0.04 mg/L	96.1	70.0	130	----
		Silicon, total	7440-21-3	E420	9.70 mg/L	10 mg/L	97.0	70.0	130	----
		Silver, total	7440-22-4	E420	0.00406 mg/L	0.004 mg/L	102	70.0	130	----
		Sodium, total	7440-23-5	E420	2.09 mg/L	2 mg/L	104	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	20.8 mg/L	20 mg/L	104	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0400 mg/L	0.04 mg/L	100.0	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00418 mg/L	0.004 mg/L	104	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0214 mg/L	0.02 mg/L	107	70.0	130	----
		Tin, total	7440-31-5	E420	0.0194 mg/L	0.02 mg/L	97.1	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0389 mg/L	0.04 mg/L	97.2	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0198 mg/L	0.02 mg/L	98.8	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00422 mg/L	0.004 mg/L	105	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.105 mg/L	0.1 mg/L	105	70.0	130	----
		Zinc, total	7440-66-6	E420	0.415 mg/L	0.4 mg/L	104	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0380 mg/L	0.04 mg/L	95.0	70.0	130	----





Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Chain of Custody (COC) / Analytical Request Form

Affix ALS barcode label here  
(lab use only)

COC Number

17

875658

Environmental Division  
Winnipeg  
Work Order Reference  
WP2414770

Contact and company name below will appear on the final report

Report Format / Distribution

Select Service Level Below - Contact your AM to

Company: Latitude Uranium Inc

Select Report Format: ☒ PDF ☒ EXCEL ☐ BDD (DIGITAL)

Regular (R) ☒ Standard TAT if received by 3 pm

Contact: Nancy Nomore

Quality Control (QC) Report with Report ☒ YES ☐ NO

4 day (P4-20%) ☐ 1 Business

Phone: 306-270-6761

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

3 day (P3-25%) ☐ Same Day, V

Company address below will appear on the final report

Select Distribution: ☒ EMAIL ☐ MAIL ☐ FAX

2 day (P2-50%) ☐ EMERGENCY (Laboratory)

Street: 303-217 Queen St. W

Email 1 or Fax ~~nancy@atheneenergy.com~~ nancy@atheneenergy.com

Date and Time Required for all ESP TATs:

City/Province: Toronto ON

Email 2 pschaenen@atheneenergy.com

For tests that can not be performed according to the service level selected, Analysis 1

Postal Code: M5V 0R2

Email 3

Indicate Filtered (F), Preserved (P) or Filled (I)

Invoice To: Same as Report To

Invoice Distribution: ☒ EMAIL ☐ MAIL ☐ FAX

Copy of Invoice with Report

Select Invoice Distribution: ☒ YES ☐ NO

Company: Project Information

Email 1 or Fax ~~ad-ur@atheneenergy.com~~ nancy@atheneenergy.com

Contact: Latitude Uranium Inc

Email 2 nancy@atheneenergy.com

ALS Account # / Quote #

A/E/Cost Center: Oil and Gas Required Fields (client use)

Job #: MWGLAK

Major/Minor Code: PO# Routing Code:

PO / A/E:

Requisitioner: Location:

LSD:

ALS Lab Work Order # (lab use only):

ALS Contact:

ALS Sample # (lab use only):

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

Sampler: ~~Edna Vasko~~ Edna Vasko

Sample Identification and/or Coordinates

Date (dd-mm-yy) Time (hh:mm) Sample Type

NUMBER OF CONTAINERS

24-WT-01

10-JUN-24 13:08 WATER

BOD

24-WT-02

10-JUN-24 12:23 WATER

Bacteriological

24-WT-03

10-JUN-24 12:44 WATER

Free/Total Chlorine

24-WT-04

10-JUN-24 12:56 WATER

General/TSS/TDS Routine

24-WT-05

10-JUN-24 14:13 WATER

Mercury

Metals

Oil + Grease

Routine

Telephone : +1 204 266 9720



WP2414770

SHIPMENT RELEASE (client use)

INITIAL SHIPMENT RECEPTION (lab use only)

FINAL SHIPMENT RECEPTION (lab use only)

Time:

Released by:

Date: June 4 10/24 H:47

Received by:

Date: 11/24/24

Time: 12:31

Received by:

Date:

Time:

Drinking Water (DW) Samples (client use)  
☐ YES ☒ NO

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

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

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

SAMPLE CONDITION AS RECEIVED (lab use only)  
Frozen ☐ Ice Packs ☐ Ice Cubes ☐ SIF Observations Yes ☐ No ☐  
Cooling Initiated ☐ Custody seal intact Yes ☐ No ☐

INITIAL COOLER TEMPERATURES °C

FINAL COOLER TEMPERATURES °C

3.2°C

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

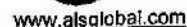
WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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

JUNE 2013 FORM

Sample Intake				
Client: <u>Latitude Uranium Ltd.</u>				
Cheque Enclosed with CoC	Yes	<u>No</u>		
Priority/Emergency Required (circle one)	Yes	<u>No</u>		
Time Sensitive Hold Time (circle one)	<u>Yes</u>	No		
Matrix (circle one)	<u>Water</u>	Soil/solid	Air	Biota
# of Bottles received:				
Green/White	<u>10X500 5X250</u>	Yellow/Black	<u>10X250ml 5X40ml</u>	
Purple/White		Light blue/White	<u>5X200ml</u>	
Warm red/White	<u>1X125ml</u>	Orange/Black		
Dark Green/White		Dark Blue/White		
Grey/black		Black/white		
Other:				
Additional Comments:				

Login Check	Check yes if you have verified the following:	
	Yes	N/A
Received date/time		
Project/PO/LSD		
Quote/Office match CoC		
Sample IDs/Description		
Sample Date/time		
Sales Items as per CoC		
Express Due Dates		
Client due date matches ALS Due date		
Client recipient emails		
Guidelines/thresholds added		
Billing/payment recorded		
Field data entered		
Sub-contracting Forms Printed		
SUBCO/Chromatograph added to client contacts for required analysis		
Are sub-samples required?		
Has a SIF been submitted for this WO?		
Has the SIF been resolved?		



**Canada Toll Free: 1 800 668 9878**

(lab use only)

COC Number: 24-Angilak

Page 1 of 1

[illegible]

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY      YELLOW - CLIENT COPY

NA-FILE (22) 86 v. 21 Encl 24 January 2014

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

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

## CERTIFICATE OF ANALYSIS

<b>Work Order</b>	<b>: WP2423397</b>		
<b>Client</b>	<b>: Atha Energy Corp.</b>	<b>Laboratory</b>	<b>: ALS Environmental - Winnipeg</b>
<b>Contact</b>	<b>: Nancy Normore</b>	<b>Account Manager</b>	<b>:</b>
<b>Address</b>	<b>: #100, 11450-160 Street NW</b>	<b>Address</b>	<b>: 1329 Niakwa Road East, Unit 12</b>
	<b>Edmonton Alberta Canada T5M 3Y7</b>		<b>Winnipeg MB Canada R2J 3T4</b>
<b>Telephone</b>	<b>: 780-467-3532</b>	<b>Telephone</b>	<b>: +1 204 255 9720</b>
<b>Project</b>	<b>: ----</b>	<b>Date Samples Received</b>	<b>: 03-Oct-2024 15:25</b>
<b>PO</b>	<b>: ----</b>	<b>Date Analysis Commenced</b>	<b>: 04-Oct-2024</b>
<b>C-O-C number</b>	<b>: ----</b>	<b>Issue Date</b>	<b>: 10-Oct-2024 11:08</b>
<b>Sampler</b>	<b>: ----</b>		
<b>Site</b>	<b>: ----</b>		
<b>Quote number</b>	<b>: 2024 Analytical Testing</b>		
<b>No. of samples received</b>	<b>: 5</b>		
<b>No. of samples analysed</b>	<b>: 5</b>		

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>
Lee McTavish		Metals, Winnipeg, Manitoba
Lee McTavish		Inorganics, Winnipeg, Manitoba
Livia Ciolan	Analyst	Organics, Winnipeg, Manitoba
Oren Wurenqiqige	Analyst	Microbiology, Winnipeg, Manitoba



## General Comments

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

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

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

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

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

Unit	Description
pH units	pH units
µS/cm	microsiemens per centimetre
mg/L	milligrams per litre
MPN/100mL	most probable number per hundred millilitres

<: less than.

>: greater than.

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

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

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

## Qualifiers

Qualifier	Description
PEHR	Parameter exceeded recommended holding time on receipt: Proceeded with analysis as requested.

Work Order : WP2423397  
Client : Atha Energy Corp.  
Project : ----







## Analytical Results

Sub-Matrix: Water

(Matrix: Water)

Sub-Matrix: Water (Matrix: Water)					Client sample ID		24-WT-001A	24-WT-002A	24-WT-003A	24-WT-004A	24-WT-005A
Client sampling date / time					30-Sep-2024 08:30		30-Sep-2024 08:50	30-Sep-2024 09:15	30-Sep-2024 09:45	30-Sep-2024 10:20	
Analyte	CAS Number	Method/Lab/Accreditation	LOR	Unit	WP2423397-001	WP2423397-002	WP2423397-003	WP2423397-004	WP2423397-005		
					Result	Result	Result	Result	Result		
Physical Tests											
Conductivity	----	E100/WP	2.0	µS/cm	61.5	79.1	87.0	71.0	45.5		
pH	----	E108/WP	0.10	pH units	7.46	7.59	7.53	7.55	6.88		
Solids, total suspended [TSS]	----	E160-L/WP	1.0	mg/L	8.0	1.6	2.5	<1.0	<1.0		
Microbiological Tests											
Coliforms, thermotolerant [fecal]	----	E010.FC/WP	1	MPN/100 mL	12 <sup>PEHR</sup>	4 <sup>PEHR</sup>	<1 <sup>PEHR</sup>	1 <sup>PEHR</sup>	1 <sup>PEHR</sup>		
Total Metals											
Aluminum, total	7429-90-5	E420/WP	0.0030	mg/L	0.0736	0.0345	0.0614	0.0294	0.0341		
Antimony, total	7440-36-0	E420/WP	0.00010	mg/L	0.00010	0.000066	0.000062	0.000018	0.000030		
Arsenic, total	7440-38-2	E420/WP	0.00010	mg/L	0.00022	0.00014	0.00027	0.00017	0.00014		
Barium, total	7440-39-3	E420/WP	0.00010	mg/L	0.0876	0.106	0.143	0.108	0.0558		
Beryllium, total	7440-41-7	E420/WP	0.000020	mg/L	0.000037	0.000010	0.000028	0.000010	0.0000091		
Bismuth, total	7440-69-9	E420/WP	0.000050	mg/L	0.000016	0.0000023	0.0000027	Not Detected	0.0000050		
Boron, total	7440-42-8	E420/WP	0.010	mg/L	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected		
Cadmium, total	7440-43-9	E420/WP	0.0000050	mg/L	0.0000929	0.0000094	0.0000100	0.0000024	0.0000065		
Calcium, total	7440-70-2	E420/WP	0.050	mg/L	6.94	10.3	12.2	9.09	5.14		
Cesium, total	7440-46-2	E420/WP	0.000010	mg/L	0.0000086	0.0000096	0.0000067	0.0000027	0.0000044		
Chromium, total	7440-47-3	E420/WP	0.00050	mg/L	0.00041	0.00023	0.00050	0.00027	0.00018		
Cobalt, total	7440-48-4	E420/WP	0.00010	mg/L	0.000058	0.000056	0.00012	0.000034	0.000035		
Copper, total	7440-50-8	E420/WP	0.00050	mg/L	0.00116	0.00112	0.00155	0.00074	0.00080		
Iron, total	7439-89-6	E420/WP	0.010	mg/L	0.156	0.099	0.230	0.070	0.064		
Lead, total	7439-92-1	E420/WP	0.000050	mg/L	0.000039	0.000044	0.000114	0.0000089	0.000023		



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	24-WT-001A	24-WT-002A	24-WT-003A	24-WT-004A	24-WT-005A
Client sampling date / time						30-Sep-2024 08:30	30-Sep-2024 08:50	30-Sep-2024 09:15	30-Sep-2024 09:45	30-Sep-2024 10:20
Analyte	CAS Number	Method/Lab/Accreditation	LOR	Unit	WP2423397-001	WP2423397-002	WP2423397-003	WP2423397-004	WP2423397-005	
					Result	Result	Result	Result	Result	
<b>Total Metals</b>										
Lithium, total	7439-93-2	E420/WP	0.0010	mg/L	0.0014	0.00082	0.0016	0.0010	0.00068	
Magnesium, total	7439-95-4	E420/WP	0.0050	mg/L	4.42	4.38	5.34	4.22	2.62	
Manganese, total	7439-96-5	E420/WP	0.00010	mg/L	0.00730	0.00601	0.0251	0.00210	0.00856	
Mercury, total	7439-97-6	E508/WP	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
Molybdenum, total	7439-98-7	E420/WP	0.000050	mg/L	0.000082	0.000277	0.000328	0.000245	0.000121	
Nickel, total	7440-02-0	E420/WP	0.00050	mg/L	0.00139	0.00081	0.00235	0.00108	0.00074	
Phosphorus, total	7723-14-0	E420/WP	0.050	mg/L	0.012	0.027	0.021	0.014	0.019	
Potassium, total	7440-09-7	E420/WP	0.050	mg/L	0.354	0.299	0.406	0.256	0.393	
Rubidium, total	7440-17-7	E420/WP	0.00020	mg/L	0.00062	0.00084	0.00127	0.00063	0.00095	
Selenium, total	7782-49-2	E420/WP	0.000050	mg/L	0.000072	0.000073	0.000068	0.000028	0.000029	
Silicon, total	7440-21-3	E420/WP	0.10	mg/L	1.75	1.42	3.30	2.37	0.74	
Silver, total	7440-22-4	E420/WP	0.000010	mg/L	0.0000060	0.0000014	0.0000038	Not Detected	0.0000021	
Sodium, total	7440-23-5	E420/WP	0.050	mg/L	1.27	0.800	1.23	0.998	0.733	
Strontium, total	7440-24-6	E420/WP	0.00020	mg/L	0.0891	0.108	0.124	0.0916	0.0799	
Sulfur, total	7704-34-9	E420/WP	0.50	mg/L	0.15	0.33	0.43	0.48	0.23	
Tellurium, total	13494-80-9	E420/WP	0.00020	mg/L	0.000049	0.000049	0.000027	Not Detected	0.000048	
Thallium, total	7440-28-0	E420/WP	0.000010	mg/L	0.0000048	0.0000011	0.0000051	Not Detected	Not Detected	
Thorium, total	7440-29-1	E420/WP	0.00010	mg/L	0.000098	0.000039	0.000069	0.000044	0.000037	
Tin, total	7440-31-5	E420/WP	0.00010	mg/L	0.000029	Not Detected	0.000027	0.000018	Not Detected	
Titanium, total	7440-32-6	E420/WP	0.00030	mg/L	0.00092	0.00103	0.00110	0.00044	0.00058	
Tungsten, total	7440-33-7	E420/WP	0.00010	mg/L	0.000014	Not Detected	0.000013	Not Detected	Not Detected	



**Analytical Results**

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

					Client sample ID	24-WT-001A	24-WT-002A	24-WT-003A	24-WT-004A	24-WT-005A
					Client sampling date / time	30-Sep-2024 08:30	30-Sep-2024 08:50	30-Sep-2024 09:15	30-Sep-2024 09:45	30-Sep-2024 10:20
Analyte	CAS Number	Method/Lab/Accreditation	LOR	Unit		WP2423397-001	WP2423397-002	WP2423397-003	WP2423397-004	WP2423397-005
						Result	Result	Result	Result	Result
<b>Total Metals</b>										
Uranium, total	7440-61-1	E420/WP	0.000010	mg/L		0.000076	0.000470	0.000267	0.000696	0.000079
Vanadium, total	7440-62-2	E420/WP	0.00050	mg/L		0.00030	0.00027	0.00032	0.00022	0.00022
Zinc, total	7440-66-6	E420/WP	0.0030	mg/L		0.0228	0.0229	0.0234	0.0085	0.0482
Zirconium, total	7440-67-7	E420/WP	0.00020	mg/L		0.00058	0.00020	0.00058	0.00032	0.00024
<b>Aggregate Organics</b>										
Biochemical oxygen demand [BOD]	----	E550/WP	2.0	mg/L		<2.0	<2.0	<2.0	<2.0	<2.0
Oil & grease (gravimetric)	----	E567/WP	5.0	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0

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

Work Order	: WP2423397	Page	: 1 of 11
Client	: APEX Geoscience Ltd.	Laboratory	: ALS Environmental - Winnipeg
Contact	: Philo Schoeman	Account Manager	:
Address	: #100, 11450-160 Street NW Edmonton AB Canada T5M 3Y7	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	: ----	Telephone	: +1 204 255 9720
Project	: ----	Date Samples Received	: 03-Oct-2024 15:25
PO	: ----	Issue Date	: 10-Oct-2024 11:08
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
Quote number	: 2024 Analytical Testing		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

### Key

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

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

**DQO:** Data Quality Objective.

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

**RPD:** Relative Percent Difference.

### Workorder Comments

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

### Summary of Outliers

#### Outliers : Quality Control Samples

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

#### Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

### ***Outliers : Analysis Holding Time Compliance (Breaches)***

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

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

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



**Outliers : Quality Control Samples**  
*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Method Blank (MB) Values</b>								
Total Metals	QC-MRG5-1694871 001	----	Arsenic, total	7440-38-2	E420	0.00043 <sup>B</sup> mg/L	0.0001 mg/L	Blank result exceeds permitted value

**Result Qualifiers**

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



## Analysis Holding Time Compliance

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

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

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

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

Matrix: **Water**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-48h] 24-WT-005A	E550	30-Sep-2024	----	----	----		04-Oct-2024	48 hrs	97 hrs	✖ EHTR
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-48h] 24-WT-003A	E550	30-Sep-2024	----	----	----		04-Oct-2024	48 hrs	98 hrs	✖ EHTR
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-48h] 24-WT-004A	E550	30-Sep-2024	----	----	----		04-Oct-2024	48 hrs	98 hrs	✖ EHTR
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-48h] 24-WT-001A	E550	30-Sep-2024	----	----	----		04-Oct-2024	48 hrs	99 hrs	✖ EHTR
Aggregate Organics : Biochemical Oxygen Demand - 5 day										
HDPE [BOD HT-48h] 24-WT-002A	E550	30-Sep-2024	----	----	----		04-Oct-2024	48 hrs	99 hrs	✖ EHTR
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) 24-WT-001A	E567	30-Sep-2024	09-Oct-2024	28 days	9 days	✓	09-Oct-2024	28 days	9 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) 24-WT-002A	E567	30-Sep-2024	09-Oct-2024	28 days	9 days	✓	09-Oct-2024	28 days	9 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) 24-WT-003A	E567	30-Sep-2024	09-Oct-2024	28 days	9 days	✓	09-Oct-2024	28 days	9 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) 24-WT-004A	E567	30-Sep-2024	09-Oct-2024	28 days	9 days	✓	09-Oct-2024	28 days	9 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid) 24-WT-005A	E567	30-Sep-2024	09-Oct-2024	28 days	9 days	✓	09-Oct-2024	28 days	9 days	✓
Microbiological Tests : Thermotolerant (Fecal) Coliform (Enzyme Substrate)										
Sterile HDPE (Sodium thiosulphate) 24-WT-005A	E010.FC	30-Sep-2024	----	----	----		04-Oct-2024	30 hrs	100 hrs	✗ EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (Enzyme Substrate)										
Sterile HDPE (Sodium thiosulphate) 24-WT-003A	E010.FC	30-Sep-2024	----	----	----		04-Oct-2024	30 hrs	101 hrs	✗ EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (Enzyme Substrate)										
Sterile HDPE (Sodium thiosulphate) 24-WT-004A	E010.FC	30-Sep-2024	----	----	----		04-Oct-2024	30 hrs	101 hrs	✗ EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (Enzyme Substrate)										
Sterile HDPE (Sodium thiosulphate) 24-WT-001A	E010.FC	30-Sep-2024	----	----	----		04-Oct-2024	30 hrs	102 hrs	✗ EHTR
Microbiological Tests : Thermotolerant (Fecal) Coliform (Enzyme Substrate)										
Sterile HDPE (Sodium thiosulphate) 24-WT-002A	E010.FC	30-Sep-2024	----	----	----		04-Oct-2024	30 hrs	102 hrs	✗ EHTR
Physical Tests : Conductivity in Water										
HDPE 24-WT-005A	E100	30-Sep-2024	07-Oct-2024	28 days	7 days	✓	07-Oct-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	
Physical Tests : Conductivity in Water										
HDPE 24-WT-001A	E100	30-Sep-2024	07-Oct-2024	28 days	8 days	✓	07-Oct-2024	28 days	8 days	✓
Physical Tests : Conductivity in Water										
HDPE 24-WT-002A	E100	30-Sep-2024	07-Oct-2024	28 days	8 days	✓	07-Oct-2024	28 days	8 days	✓
Physical Tests : Conductivity in Water										
HDPE 24-WT-003A	E100	30-Sep-2024	07-Oct-2024	28 days	8 days	✓	07-Oct-2024	28 days	8 days	✓
Physical Tests : Conductivity in Water										
HDPE 24-WT-004A	E100	30-Sep-2024	07-Oct-2024	28 days	8 days	✓	07-Oct-2024	28 days	8 days	✓
Physical Tests : pH by Meter										
HDPE 24-WT-005A	E108	30-Sep-2024	07-Oct-2024	0.25 hrs	179 hrs	✗ EHTR-FM	07-Oct-2024	0.25 hrs	179 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE 24-WT-004A	E108	30-Sep-2024	07-Oct-2024	0.25 hrs	180 hrs	✗ EHTR-FM	07-Oct-2024	0.25 hrs	180 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE 24-WT-003A	E108	30-Sep-2024	07-Oct-2024	0.25 hrs	180 hrs	✗ EHTR-FM	07-Oct-2024	0.25 hrs	181 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE 24-WT-001A	E108	30-Sep-2024	07-Oct-2024	0.25 hrs	181 hrs	✗ EHTR-FM	07-Oct-2024	0.25 hrs	181 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE 24-WT-002A	E108	30-Sep-2024	07-Oct-2024	0.25 hrs	181 hrs	✗ EHTR-FM	07-Oct-2024	0.25 hrs	181 hrs	✗ EHTR-FM



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE 24-WT-001A	E160-L	30-Sep-2024	----	----	----		08-Oct-2024	7 days	8 days	✖ EHT
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE 24-WT-002A	E160-L	30-Sep-2024	----	----	----		08-Oct-2024	7 days	8 days	✖ EHT
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE 24-WT-003A	E160-L	30-Sep-2024	----	----	----		08-Oct-2024	7 days	8 days	✖ EHT
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE 24-WT-004A	E160-L	30-Sep-2024	----	----	----		08-Oct-2024	7 days	8 days	✖ EHT
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE 24-WT-005A	E160-L	30-Sep-2024	----	----	----		08-Oct-2024	7 days	8 days	✖ EHT
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) 24-WT-001A	E508	30-Sep-2024	08-Oct-2024	28 days	8 days	✓	08-Oct-2024	28 days	8 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) 24-WT-002A	E508	30-Sep-2024	08-Oct-2024	28 days	8 days	✓	08-Oct-2024	28 days	8 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) 24-WT-003A	E508	30-Sep-2024	08-Oct-2024	28 days	8 days	✓	08-Oct-2024	28 days	8 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) 24-WT-004A	E508	30-Sep-2024	08-Oct-2024	28 days	8 days	✓	08-Oct-2024	28 days	8 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) 24-WT-005A	E508	30-Sep-2024	08-Oct-2024	28 days	8 days	✓	08-Oct-2024	28 days	8 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) 24-WT-001A	E420	30-Sep-2024	07-Oct-2024	180 days	7 days	✓	07-Oct-2024	180 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) 24-WT-002A	E420	30-Sep-2024	07-Oct-2024	180 days	7 days	✓	07-Oct-2024	180 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) 24-WT-003A	E420	30-Sep-2024	07-Oct-2024	180 days	7 days	✓	07-Oct-2024	180 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) 24-WT-004A	E420	30-Sep-2024	07-Oct-2024	180 days	7 days	✓	07-Oct-2024	180 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) 24-WT-005A	E420	30-Sep-2024	07-Oct-2024	180 days	7 days	✓	07-Oct-2024	180 days	7 days	✓

**Legend & Qualifier Definitions**

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended  
 EHTR: Exceeded ALS recommended hold time prior to sample receipt.  
 EHT: Exceeded ALS recommended hold time prior to analysis.  
 Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

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

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Biochemical Oxygen Demand - 5 day	E550	1694539	1	17	5.8	5.0	✓
Conductivity in Water	E100	1696291	1	18	5.5	5.0	✓
pH by Meter	E108	1696292	1	18	5.5	5.0	✓
Thermotolerant (Fecal) Coliform (Enzyme Substrate)	E010.FC	1694471	0	5	0.0	5.0	✗
Total Mercury in Water by CVAAS	E508	1696057	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1694871	1	13	7.6	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	1701282	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Biochemical Oxygen Demand - 5 day	E550	1694539	1	17	5.8	5.0	✓
Conductivity in Water	E100	1696291	1	18	5.5	5.0	✓
Oil & Grease by Gravimetry	E567	1696067	1	20	5.0	5.0	✓
pH by Meter	E108	1696292	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1696057	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1694871	1	13	7.6	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	1701282	1	20	5.0	5.0	✓
Method Blanks (MB)							
Biochemical Oxygen Demand - 5 day	E550	1694539	1	17	5.8	5.0	✓
Conductivity in Water	E100	1696291	1	18	5.5	5.0	✓
Oil & Grease by Gravimetry	E567	1696067	1	20	5.0	5.0	✓
Thermotolerant (Fecal) Coliform (Enzyme Substrate)	E010.FC	1694471	1	5	20.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1696057	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1694871	1	13	7.6	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	1701282	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Total Mercury in Water by CVAAS	E508	1696057	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1694871	1	13	7.6	5.0	✓



## Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Thermotolerant (Fecal) Coliform (Enzyme Substrate)	E010.FC ALS Environmental - Winnipeg	Water	APHA 9223 (mod)	The enzyme substrate test detects Thermotolerant Coliforms in a 100 mL sample after an 18 hour incubation at $44.5 \pm 0.2^{\circ}\text{C}$ .
Conductivity in Water	E100 ALS Environmental - Winnipeg	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to $25^{\circ}\text{C}$ .
pH by Meter	E108 ALS Environmental - Winnipeg	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally $20 \pm 5^{\circ}\text{C}$ ). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
TSS by Gravimetry (Low Level)	E160-L ALS Environmental - Winnipeg	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.
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Winnipeg	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.
Total Mercury in Water by CVAAS	E508 ALS Environmental - Winnipeg	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS
Biochemical Oxygen Demand - 5 day	E550 ALS Environmental - Winnipeg	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter.  Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
Oil & Grease by Gravimetry	E567 ALS Environmental - Winnipeg	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions

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Work Order : WP2423397  
Client : APEX Geoscience Ltd.  
Project : ----



Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567  ALS Environmental - Winnipeg	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.

QUALITY CONTROL REPORT

Work Order	: WP2423397	Page	: 1 of 10
Client	: APEX Geoscience Ltd.	Laboratory	: ALS Environmental - Winnipeg
Contact	: Philo Schoeman	Account Manager	:
Address	: 217 - 401 Queen Street West Toronto ON Canada M5V 0R2	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	: ----	Telephone	: +1 204 255 9720
Project	: ----	Date Samples Received	: 03-Oct-2024 15:25
PO	: ----	Date Analysis Commenced	: 04-Oct-2024
C-O-C number	: ----	Issue Date	: 10-Oct-2024 11:12
Sampler	: ----		
Site	: ----		
Quote number	: 2024 Analytical Testing		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	Position	Laboratory Department
Lee McTavish		Winnipeg Inorganics, Winnipeg, Manitoba
Lee McTavish		Winnipeg Metals, Winnipeg, Manitoba
Livia Ciolan	Analyst	Winnipeg Organics, Winnipeg, Manitoba
Oren Wurenqiqige	Analyst	Winnipeg Microbiology, Winnipeg, Manitoba



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## General Comments

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

### Key :

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

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

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

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

## Workorder Comments

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

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Laboratory Duplicate (DUP) Report

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

					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: 1696291)											
WP2423410-001	Anonymous	Conductivity	----	E100	2.0	µS/cm	1040	1050	0.671%	10%	----
Physical Tests (QC Lot: 1696292)											
WP2423410-001	Anonymous	pH	----	E108	0.10	pH units	7.59	7.51	1.06%	4%	----
Physical Tests (QC Lot: 1701282)											
WP2422980-001	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.0	mg/L	2.8	2.4	0.4	Diff <2x LOR	----
Total Metals (QC Lot: 1694871)											
WP2423370-002	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00141	0.00141	0.192%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Total Metals (QC Lot: 1694871) - continued											
WP2423370-002	Anonymous	Silicon, total	7440-21-3	E420	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
		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	<0.050	<0.050	0	Diff <2x LOR	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1696057)											
WP2423298-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1694539)											
WP2423396-004	Anonymous	Biochemical oxygen demand [BOD]	----	E550	6.0	mg/L	46.1	44.5	3.5%	30%	----



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: 1696291)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests (QCLot: 1701282)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Microbiological Tests (QCLot: 1694471)						
Coliforms, thermotolerant [fecal]	----	E010.FC	1	MPN/100mL	<1	----
Total Metals (QCLot: 1694871)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	# 0.00043	B
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	----



Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1694871) - continued						
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 1696057)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Aggregate Organics (QCLot: 1694539)						
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	<2.0	----
Aggregate Organics (QCLot: 1696067)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----

Qualifiers

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



Laboratory Control Sample (LCS) Report

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

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1696291)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	100	90.0	110	----
Physical Tests (QCLot: 1696292)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 1701282)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	150 mg/L	112	85.0	115	----
Total Metals (QCLot: 1694871)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	98.5	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	97.7	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	98.7	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	99.6	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	100	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	100	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	96.0	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	95.2	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	99.6	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	93.9	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	96.6	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	96.3	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	94.6	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	91.8	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	91.4	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	100	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	105	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.1	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	100	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	93.8	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	106	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	97.1	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	99.5	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	91.4	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	98.8	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	90.8	80.0	120	----



Sub-Matrix: Water					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Target Concentration	LCS	Low	High	
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1694871) - continued									
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	96.4	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	108	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	96.9	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	93.7	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	87.7	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	94.5	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	96.1	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	95.4	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	91.3	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	97.9	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	93.6	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	96.3	80.0	120	----
Total Metals (QCLot: 1696057)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	97.2	80.0	120	----
Aggregate Organics (QCLot: 1694539)									
Biochemical oxygen demand [BOD]	----	E550	2	mg/L	198 mg/L	93.5	85.0	115	----
Aggregate Organics (QCLot: 1696067)									
Oil & grease (gravimetric)	----	E567	5	mg/L	100 mg/L	104	70.0	130	----



Matrix Spike (MS) Report

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

Sub-Matrix: Water					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1694871)										
WP2423370-002	Anonymous	Aluminum, total	7429-90-5	E420	0.212 mg/L	0.2 mg/L	106	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0210 mg/L	0.02 mg/L	105	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0210 mg/L	0.02 mg/L	105	70.0	130	----
		Barium, total	7440-39-3	E420	0.0217 mg/L	0.02 mg/L	109	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0428 mg/L	0.04 mg/L	107	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0104 mg/L	0.01 mg/L	104	70.0	130	----
		Boron, total	7440-42-8	E420	0.114 mg/L	0.1 mg/L	114	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00421 mg/L	0.004 mg/L	105	70.0	130	----
		Calcium, total	7440-70-2	E420	4.23 mg/L	4 mg/L	106	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0105 mg/L	0.01 mg/L	105	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0416 mg/L	0.04 mg/L	104	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0209 mg/L	0.02 mg/L	104	70.0	130	----
		Copper, total	7440-50-8	E420	0.0207 mg/L	0.02 mg/L	104	70.0	130	----
		Iron, total	7439-89-6	E420	2.13 mg/L	2 mg/L	106	70.0	130	----
		Lead, total	7439-92-1	E420	0.0199 mg/L	0.02 mg/L	99.7	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	1.05 mg/L	1 mg/L	105	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0211 mg/L	0.02 mg/L	105	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0214 mg/L	0.02 mg/L	107	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0416 mg/L	0.04 mg/L	104	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.6 mg/L	10 mg/L	106	70.0	130	----
		Potassium, total	7440-09-7	E420	4.13 mg/L	4 mg/L	103	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0216 mg/L	0.02 mg/L	108	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0406 mg/L	0.04 mg/L	101	70.0	130	----
		Silicon, total	7440-21-3	E420	10.2 mg/L	10 mg/L	102	70.0	130	----
		Silver, total	7440-22-4	E420	0.00439 mg/L	0.004 mg/L	110	70.0	130	----
		Sodium, total	7440-23-5	E420	2.17 mg/L	2 mg/L	108	70.0	130	----
		Strontium, total	7440-24-6	E420	0.0210 mg/L	0.02 mg/L	105	70.0	130	----
		Sulfur, total	7704-34-9	E420	21.5 mg/L	20 mg/L	108	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0427 mg/L	0.04 mg/L	107	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00398 mg/L	0.004 mg/L	99.6	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0212 mg/L	0.02 mg/L	106	70.0	130	----
		Tin, total	7440-31-5	E420	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0406 mg/L	0.04 mg/L	102	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00409 mg/L	0.004 mg/L	102	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.104 mg/L	0.1 mg/L	104	70.0	130	----
		Zinc, total	7440-66-6	E420	0.410 mg/L	0.4 mg/L	102	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0430 mg/L	0.04 mg/L	108	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: 1696057)										
WP2423298-005	Anonymous	Mercury, total	7439-97-6	E508	0.0000833 mg/L	0 mg/L	83.3	70.0	130	----





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COC Number: 24-Angilak

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

WHITE - LABORATORY COPY      YELLOW - CLIENT COPY

NA FM 03260 V09 F (rev. 04 January 2011)

Sample Intake							
Client: <u>Latitude Uranium</u>					COC receipt info complete <input type="checkbox"/>		
Express TAT?	<u>no</u>	same day	1 day	2 day	3 days	4 day	
Short hold time?	<u>no</u>	<24 hrs	1 day	<u>2 days</u>	3 days	4 days	
Matrix:	<u>Water</u>	Soil/solid	Air	Biota	Food/micro	Other	
Total number of bottles/fractions:		<u>45</u>					
Green/white	<u>10X500; 5X250</u>		Orange/black				
Purple/white			Dark blue/white				
Red/white	<u>5X125</u>		Black/white				
Dark green/white			Brown/white				
Grey/white			Pink/white				
Yellow/black	<u>10X250; 5X60</u>		Beige/white				
Light blue/white	<u>5X200; 5X100</u>		Other (specify)				
Comments: <u>1.6°; ice pack</u>							

Sample Login					
Receipt Window	<u>✓/X</u>	N/A	Bottles	<u>✓/X</u>	N/A
# of fractions, matrix and submatrix			All received bottles have IDs		
Client, office, contact, quote, project			Type, volume, and locations		
Receipt time/date, PO, project, site			Labels and internal COCs printed		
Temp, cooling method, sampler			Client Contacts	<u>✓/X</u>	N/A
Sample Info	<u>✓/X</u>	N/A	Report/invoice/EDD recipients		
Sample date/time			Report types/formats		
Sample ID/description			Post-committing	<u>✓/X</u>	N/A
Sales items			Runs built and field data entered		
Guidelines/thresholds			Billing information entered		
Additional sample/WO information			Action Required?	Yes	No
Due Dates	<u>✓/X</u>	N/A	Update default receipt data		
COC/GEL/client due dates match			Update default report data		
Express TAT surcharges			Add sales/billing items to quote		
Clock running for all samples			SIF initiated (elaborate in comments)		
Comments:					



**Canada Toll Free: 1 800 668 9878**

COC Number: 24-Angilak

Page 1 of 1

Environmental Division  
Winnipeg  
Work Order Reference  
**WP2423397**



Telephone - 1 204 255 9720

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



Sample Intake									
Client: <i>Latitude Uranium</i>					COC receipt info complete <input type="checkbox"/>				
Express TAT?	<i>no</i>	same day	1 day	2 day	Yes: 3 days 4 day				
Short hold time?	<i>no</i>	<24 hrs	1 day	<i>2 days</i>	Yes: 3 days 4 days				
Matrix	<i>Water</i>	Soil/solid	Air	Biota	Food/micro Other				
Total number of bottles/fractions: <i>45</i>									
Green/white	<i>10x500, 5x250</i>		Orange/black						
Purple/white			Dark blue/white						
Red/white	<i>5x125</i>		Black/white						
Dark green/white			Brown/white						
Grey/white			Pink/white						
Yellow/black	<i>10x250, 5x60</i>		Beige/white						
Light blue/white	<i>5x200, 5x100</i>		Other (specify)						
Comments: <i>1.6°; ice pack</i>									

Sample Login					
Receipt Window	<i>✓/X</i>	N/A	Bottles	<i>✓/X</i>	N/A
id of fractions, matrix and submatrix			All received bottles have IDs		
Client, office, contact, quote, project			Type, volume, and locations		
Receipt time/date, PO, project, site			Labels and internal COCs printed		
Temp. cooling method, sampler			Client Contacts	<i>✓/X</i>	N/A
Sample Info	<i>✓/X</i>	N/A	Report/invoice/EDD recipients		
Sample date/time			Report types/formats		
Sample ID/description			Post-commencing	<i>✓/X</i>	N/A
Sales items			Runs built and field data entered		
Guidelines/thresholds			Billing information entered		
Additional sample/WO information			Action Required?	Yes	No
Due Dates	<i>✓/X</i>	N/A	Update default receipt data		
COC/GEL/client due dates match			Update default report data		
Express TAT surcharges			Add sales/billing items to quote		
Clock running for all samples			SIF Initiated (elaborate in comments)		
Comments:					