ALS Canada Ltd.

Contact

Sampler



CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Account Manager

: VA23A2718 **Work Order** Page : 1 of 3

Client Laboratory : Vancouver - Environmental : Vancouver School Board

: Tasnia Tarannum Address : 1549 Clark Drive Address

: 8081 Lougheed Highway Vancouver BC Canada V5L 3L4

Burnaby, British Columbia Canada V5A 1W9

Telephone Telephone : +1 604 253 4188 · ----Project : Total Education **Date Samples Received** : 06-Feb-2023 14:45

Date Analysis Commenced : 08-Feb-2023 PO

: 09-Feb-2023 08:46 C-O-C number : 20-1041756 Issue Date

Site : ----

Quote number : Standing Offer

No. of samples received : 2 No. of samples analysed : 2

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

This Certificate of Analysis contains the following information:

: R. Lemay

: Stephen Thomas

- General Comments
- Analytical Results
- Guideline Comparison

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

Signatories

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

Signatories Laboratory Department Position

Kevin Duarte Supervisor - Metals ICP Instrumentation Metals, Burnaby, British Columbia Page : 2 of 3 Work Order · VA23A2718

Client : Vancouver School Board

Project : Total Education



No Breaches Found

General Comments

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

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

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

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

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

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

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

Unit	Description
mg/L	milligrams per litre

>: greater than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

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

<: less than.

Page

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Client Vancouver School Board

Total Education Project



Analytical Results Evaluation

Matrix:	Client samp	ole ID	 	 	 	
	Sampling date	e/time	 	 	 	
	Sub-i	Matrix		 	 	
Analyte	CAS Number Ur	nit	 	 	 	
	-					
Please refer to the General Comments s	section for an explanation of any qualifier	s detected.				
Lead, total	7439-92	2-1 mg/L				



QUALITY CONTROL INTERPRETIVE REPORT

Work Order : **VA23A2718** Page : 1 of 5

Client : Vancouver School Board Laboratory : Vancouver - Environmental

Contact : Stephen Thomas Account Manager : Tasnia Tarannum

Address :1549 Clark Drive Address :8081 Lougheed Highway

Burnaby, British Columbia Canada V5A 1W9

Telephone :--- Telephone :+1 604 253 4188

Project : Total Education Date Samples Received : 06-Feb-2023 14:45

PO : ---- Issue Date : 09-Feb-2023 08:46

C-O-C number : 20-1041756
Sampler : R. Lemay

Vancouver BC Canada V5L 3L4

Site :---

Quote number : Standing Offer

No. of samples received :2
No. of samples analysed :2

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

Key

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

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

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

No Reference Material (RM) Sample outliers occur.

Outliers: Analysis Holding Time Compliance (Breaches) ■ No Analysis Holding Time Outliers exist.

Outliers: Frequency of Quality Control Samples • No Quality Control Sample Frequency Outliers occur.

Page : 3 of 5 Work Order : VA23A2718

Client : Vancouver School Board

Project : Total Education



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

Livated Livate										Holding Hill	
Analyte Group	Method Sampling Date Extraction / Preparation				Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Preparation	Holding	g Times	Eval	Analysis Date	Holding	g Times	Eval	
			Date	Rec	Actual			Rec	Actual		
Total Metals : Total metals in Water by CRC ICPMS											
HDPE - total (lab preserved)											
Corr. 129 Rm. 103 Bottle Filler	E420	06-Feb-2023	08-Feb-2023				08-Feb-2023	180	2 days	✓	
								days			
Total Metals : Total metals in Water by CRC ICPMS											
HDPE - total (lab preserved)											
Corr. 129 Rm. 119 S.S.D.F.	E420	06-Feb-2023	08-Feb-2023				08-Feb-2023	180	2 days	✓	
								days			

Legend & Qualifier Definitions

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

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Client : Vancouver School Board

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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	n: 🗴 = QC freque	ency outside spe	ecification; ✓ = 0	QC frequency wit	hin specification.
Quality Control Sample Type			Co	ount	Frequency (%)		
Analytical Methods	Method	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Total metals in Water by CRC ICPMS	E420	826244	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Total metals in Water by CRC ICPMS	E420	826244	1	20	5.0	5.0	✓
Method Blanks (MB)							
Total metals in Water by CRC ICPMS	E420	826244	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Total metals in Water by CRC ICPMS	E420	826244	1	20	5.0	5.0	✓

Page : 5 of 5 Work Order : VA23A2718

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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
Total metals in Water by CRC ICPMS	E420	Water	EPA 200.2/6020B	Water samples are digested with nitric and hydrochloric acids, and analyzed by
	Vancouver -		(mod)	Collision/Reaction Cell ICPMS.
	Environmental			Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

ALS Canada Ltd.



QUALITY CONTROL REPORT

Work Order : VA23A2718

Client : Vancouver School Board

Contact : Stephen Thomas

Address : 1549 Clark Drive

Vancouver BC Canada V5L 3L4

Telephone

Project : Total Education

PO :----

C-O-C number : 20-1041756 Sampler : R. Lemay

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Date Analysis Commenced : 08-Feb-2023

Issue Date : 09-Feb-2023 08:46

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

Kevin Duarte Supervisor - Metals ICP Instrumentation

Vancouver Metals, Burnaby, British Columbia

Page : 2 of 3 Work Order : VA23A2718

Client : Vancouver School Board

Project : Total Education

ALS

General Comments

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

Key:

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

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

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water							Labora	tory Duplicate (D	JP) 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 Lo	t: 826244)										
VA23A2711-001	Anonymous	Lead, total	7439-92-1	E420	0.000050	mg/L	0.108	0.105	3.20%	20%	

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
Total Metals (QCLot: 826244)						
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	

Page : 3 of 3 Work Order : VA23A2718

Client : Vancouver School Board

Project : Total Education



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	Concentration	LCS	Low	High	Qualifier	
Total Metals (QCLot: 826244)										
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	99.5	80.0	120		

Matrix Spike (MS) Report

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

Sub-Matrix: Water					Matrix Spike (MS) Report						
					Sp	ike	Recovery (%)	Recovery	Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier	
Total Metals (QC	Lot: 826244)										
VA23A2711-002	Anonymous	Lead, total	7439-92-1	E420	ND mg/L	0.02 mg/L	ND	70.0	130		

(ALS use only)

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ALS Sample #

ALS Lab Work Order # (ALS use only):

PO/AFE: Job #: ALS Account # / Quote #

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ompany:

City/Province

Vancouver

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ostal Code:

nvoice To

Same as Report To

Copy of Invoice with Report



www.alsglobal.com

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Canada Toll Free: 1 800 668 9878

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Report To hone Contact Company: Company address below will appear on the final report yancouver Contact and company name below will appear on the final report -214 1 hones School Board Select Report Format: Select Distribution: Compare Results to Criteria on Report - provide details below if box checked * . Merge QC/QCI Reports with COA , ... ☐ YES ☐ NO ☐ NA IIMM W ₹ 8 Reports / Recipients ☐ MAIL EXCEL EDD (DIGITAL) furnaround Time (TAT) Requested AFFIX ALS BARCODE LABEL HERE
(ALS use only)

Drinking Water (DW) Samples' (client use) stal Education Project Information Sample Identification and/or Coordinates This description will appear on the report) 7,3 3 3 ji T 7 Ø 1 Ř ă The state of the state of Ę. S. e. 2. 1. 12 THE PRINTER 중 중 7 Notes / Specify Limits for result evaluation by selecting from drop-down below 14 H 50 Battle Filer ** 2 4dece 2 3 ÷ ALS Contact Taranhum Email 3 Johnson Email 2 (CASSE) (@. 156) Major/Minor Code: 3-34 - 13 - 13 - 13 - 13 - 14-14-AFE/Cost Center: 3.1W1: -Select Invoice Distribution: Email 2 Email 1 or Fax . q , 4, f Requisitioner: Email 1 or Fax 55 Homes こうないない ocation: Change į ŗ 4 Oil and Gas Required Fields (client use) (Excel COC only) J לכיתטחפש פי נו ני 06.02.23 06-02-23 4 WEF, MA A war to strate (dd-mmm-yy) 1 are its soften . Date Invoice Recipients The state of ÷ D. EMAIL D @ isb. bc. ca PQ# Routing Code: Ċ Sampler: R. Leman 7:18am á 7:23am 4 70 10 . 248.4 a Mr. Cress (hh:mm) Time MAJL . 7 2 2 4 7 11 - TATE OF STREET ξ 6 water FAX *** The Opening ・ 一門 万原計 water Sample Type · Hitcher may . . . Contine [R] If received by 3pm M-F - no surcharges apply 4.

4 day [P4] if received by 3pm M-F - 20% rish surcharge minimum

3 day [P3] if received by 3pm M-F - 25% rish surcharge minimum

2 day [P3] if received by 3pm M-F - 50% rish surcharge minimum

1 day [P3] if received by 3pm M-F - 100% rish surcharge minimum

1 day [E] if received by 3pm M-F - 100% rish surcharge minimum Cooling Method: None None 13 NUMBER OF CONTAINERS ☐ Same day [22] if received by 10am M-5 - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests Lead Date and Time Required for all E&P TATs: Š 101 č j ż Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below For all tests with rush TATs requested, please contact your AM to confirm availability. į ř, -SAMPLE RECEIPT DETAILS (ALS use only) - make whenthe with phillippe of the 3 Telephone: +1 504 253 4188 Environmental Division CE PACKS Analysis Request 表: : F n 4, 3 3 0 ij 뜮 Ĵ 74 NO W 7 SAMPLES ON HOLD ڎٙ EXTENDED STORAGE REQUIRED

SUSPECTED HAZARD (see notes

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

Released by:

Are samples taken from a Regulated DW System?

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61 #4

vre samples for human consumption/ use?

XX YES - []

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SHIPMENT RELEASE (client use)

力 YESTED NO

No preservatives added

Submission Comments identified on Sample Receipt Notification:

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FROZEN

ooler Custody Seals Infact: 🎺 🔲 YES 📋 N/A 🥕 Sample Custody

Seals Intact:

. □ YES

□ NA

□ YES □ NO

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 l. If any water samples are taken from a Regulated Drinking Water (DW) System rized DW COC form agrees with the Terms and Conditions as specified on the back page of the white - report

Time:

Received by:

INITIAL SHIPMENT RECEPTION (ALS use only

WHITE - LABORATORY COPY

YELLOW - CLIENT CO

Time:

Received by:

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Results Summary VA23A2718

Project Total Education

Report To Stephen Thomas, Vancouver School Board

 Date Received
 06-Feb-2023 14:45

 Issue Date
 09-Feb-2023 08:47

Amendment 0

 Client Sample ID
 Corr. 129 Rm. 119 S.S.D.F.
 Corr. 129 Rm. 103 Bottle Filler

 Date Sampled
 06-Feb-2023
 06-Feb-2023

 Time Sampled
 07:18
 07:23

 ALS Sample ID
 VA23A2718-001
 VA23A2718-002

Lowest Units Sub-Matrix: Sub-Matrix: Analyte Detection Limit Units Water Water

Total Metals (Matrix: Water)

Lead, total 0.000050 mg/L 0.00958 0.000078