

VANCOUVER SCHOOL BOARD
Maintenance and Construction
1549 Clark Drive
Vancouver BC V5L 3L4
ATTN: Stephen Thomas

Date: 17-SEP-19
PO No.: 1517879
WO No.: L2343813

LSD:

Project Ref: BRITTANIA SECONDARY

Sample ID: RM 213 BUB
Sampled By: Robin Lemay
Date Collected: 09-SEP-19
Lab Sample ID: L2343813-1

Matrix: Water

Vancouver BC V5L 3L4 ATTN: Stephen Thomas			watrix: wate	er	PAGE	1 of 9
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.00177		mg/L	0.005		12-SEP-19
* CDWQG = Health Canada Guideline Limits updated * CDWQG for Nitrate+Nitrite-N is the limit for nitrate only * Turbidity guideline based on membrane filtration. For a Summary Table of Guidelines for Canadian Drinking Wa - A blank entry designates no known limit. - A shaded value in the Results column exceeds CDWQ Approved by Edward Ngai	guidelines on con ter Quality	ventional treatm	ent and slow sand			ase see

Account Manager





Date: 17-SEP-19 PO No.: 1517879 WO No.: L2343813

LSD:

Project Ref: BRITTANIA SECONDARY

Sample ID: RM 216 SSDF Sampled By: Robin Lemay Date Collected: 09-SEP-19 Lab Sample ID: L2343813-2

Matrix: Water

Vancouver BC V5L 3L4 ATTN: Stephen Thomas			watrix: wate	er	PAGE	2 of 9
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.000633		mg/L	0.005		12-SEP-19
* CDWQG = Health Canada Guideline Limits updated * CDWQG for Nitrate+Nitrite-N is the limit for nitrate only * Turbidity guideline based on membrane filtration. For a Summary Table of Guidelines for Canadian Drinking Wa - A blank entry designates no known limit. - A shaded value in the Results column exceeds CDWQ Approved by Edward Ngai	guidelines on con ter Quality	ventional treatm	ent and slow sand			ase see

Account Manager





Date: 17-SEP-19 PO No.: 1517879 WO No.: L2343813

LSD:

Project Ref: BRITTANIA SECONDARY

Sample ID: RM 203 FS
Sampled By: Robin Lemay

Date Collected: 09-SEP-19
Lab Sample ID: L2343813-3

Matrix: Water

Vancouver BC V5L 3L4 ATTN: Stephen Thomas			watrix: wate	er	PAGE	3 of 9
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.000411		mg/L	0.005		12-SEP-19
* CDWQG = Health Canada Guideline Limits updated * CDWQG for Nitrate+Nitrite-N is the limit for nitrate only * Turbidity guideline based on membrane filtration. For a Summary Table of Guidelines for Canadian Drinking Wa - A blank entry designates no known limit. - A shaded value in the Results column exceeds CDWQ Approved by Edward Ngai	guidelines on con ter Quality	ventional treatm	ent and slow sand			ase see

Account Manager





Date: 17-SEP-19
PO No.: 1517879
WO No.: L2343813

LSD:

Project Ref: BRITTANIA SECONDARY

Sample ID: RM 220 SSDF Sampled By: Robin Lemay Date Collected: 09-SEP-19 Lab Sample ID: L2343813-4

Matrix: Water

Vancouver BC V5L 3L4 ATTN: Stephen Thomas			Matrix: Wate	er	PAGE	4 of 9
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.000479		mg/L	0.005		12-SEP-19
* CDWQG = Health Canada Guideline Limits updated * CDWQG for Nitrate+Nitrite-N is the limit for nitrate only * Turbidity guideline based on membrane filtration. For commany Table of Guidelines for Canadian Drinking War - A blank entry designates no known limit. - A shaded value in the Results column exceeds CDWQ	guidelines on con ter Quality	ventional treatm	ent and slow sand			ase see

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Account Manager





VANCOUVER SCHOOL BOARD Maintenance and Construction 1549 Clark Drive Vancouver BC V5L 3L4 ATTN: Stephen Thomas

Date: 17-SEP-19 **PO No.:** 1517879 **WO No.:** L2343813

LSD:

Project Ref: BRITTANIA SECONDARY

Sample ID: RM B 204 BUB Sampled By: Robin Lemay Date Collected: 09-SEP-19 Lab Sample ID: L2343813-5 Matrix: Water

PAGE 5 of 9

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Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.000666		mg/L	0.005		12-SEP-19
CDWQG = Health Canada Guideline Limits updated	JUNE 2019					
* CDWQG for Nitrate+Nitrite-N is the limit for nitrate only	. If present as N	itrate then the li	mit is 10mg/L < or	N.D. = less than det	ection limit.	

- * Turbidity guideline based on membrane filtration. For guidelines on conventional treatment and slow sand or diatomaceous earth filtration please see Summary Table of Guidelines for Canadian Drinking Water Quality
- A blank entry designates no known limit.
- A shaded value in the Results column exceeds CDWQG MAC and/ or Aesthetic Objective.

Approved by

Edward Ngai

Account Manager





Date: 17-SEP-19 PO No.: 1517879 WO No.: L2343813

LSD:

Project Ref: BRITTANIA SECONDARY

Sample ID: RM 325 SSDF Sampled By: Robin Lemay Date Collected: 09-SEP-19 Lab Sample ID: L2343813-6

Matrix: Water

Vancouver BC V5L 3L4 ATTN: Stephen Thomas			Watrix. Wate	ei	PAGE	6 of 9
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.000670		mg/L	0.005		12-SEP-19
* CDWQG = Health Canada Guideline Limits updated * CDWQG for Nitrate+Nitrite-N is the limit for nitrate only * Turbidity guideline based on membrane filtration. For good summary Table of Guidelines for Canadian Drinking War - A blank entry designates no known limit. - A shaded value in the Results column exceeds CDWQG	uidelines on con ter Quality	ventional treatm	ent and slow sand			ase see

Account Manager





Date: 17-SEP-19
PO No.: 1517879
WO No.: L2343813

LSD:

Project Ref: BRITTANIA SECONDARY

Sample ID: RM 334 DF
Sampled By: Robin Lemay

Date Collected: 09-SEP-19
Lab Sample ID: L2343813-7

Matrix: Water

Vancouver BC V5L 3L4 ATTN: Stephen Thomas			Matrix: Wate	er	PAGE	7 of 9
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.000554		mg/L	0.005		12-SEP-19
* CDWQG = Health Canada Guideline Limits updated * CDWQG for Nitrate+Nitrite-N is the limit for nitrate only * Turbidity guideline based on membrane filtration. For commany Table of Guidelines for Canadian Drinking War - A blank entry designates no known limit. - A shaded value in the Results column exceeds CDWQ	guidelines on con ter Quality	ventional treatm	ent and slow sand			ase see

Account Manager





Date: 17-SEP-19 PO No.: 1517879 WO No.: L2343813

LSD:

Project Ref: BRITTANIA SECONDARY

Sample ID: RM 331 SSDF Sampled By: Robin Lemay Date Collected: 09-SEP-19 Lab Sample ID: L2343813-8

Matrix: Water

ATTN: Stephen Thomas			Matrix: Wate	,	PAGE	8 of 9
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.000369		mg/L	0.005		12-SEP-19
* CDWQG = Health Canada Guideline Limits updated * CDWQG for Nitrate+Nitrite-N is the limit for nitrate only. I * Turbidity guideline based on membrane filtration. For gui Summary Table of Guidelines for Canadian Drinking Water - A blank entry designates no known limit. - A shaded value in the Results column exceeds CDWQG Approved by	idelines on con r Quality	ventional treatm	ent and slow sand			ase see

Account Manager



Guidelines & Objectives

Health Canada MAC Health Related Criteria Limits

Nitrate/Nitrite-N* Criteria limit is 10 mg/L (1.0 mg/L if present as all Nitrite-N). High concentrations may contribute to blue baby syndrome in infants.

Lead* A cumulative body poison, uncommon in naturally occurring hard waters.

Fluoride* Present in fluoridated water supplies at 0.8 mg/L to reduce dental caries. Elevated levels causes fluorosis (mottling of teeth).

Total Coliforms* Criteria is 0 CFU/100mL. Adverse health effects.

E. Coli* Criteria is 0 CFU/100 mL. Certain E. Coli bacteria can be life threatening.

Manganese* Criteria limit is 0.12 mg/L. Possible neurological effects in infants.

*Health Canada Canadian Drinking Water Quality Guidelines (MAC limit)

Aesthetic Objective Concentration Levels

Alkalinity Acid neutralizing capacity. Usually a measure of carbonate and bicarbonates and calculated and reported as calcium carbonate.

Balance Quality control parameter ratioing cations to anions
Bicarbonate See Alkalinity. Report as the anion HCO3-1
Carbonate See Alkalinity. Reported at the anion CO3-2

Calcium See Hardness. Common major cation of water chemistry.

Chloride Common major anion of water chemistry.

Conductance Physical test measuring water salinity (dissolved ions or solids)

Hardness Classical measure or capacity of water to precipitate soap (chiefly calcium and magnesium ions). Causes scaling tendency in

water if carbonates/bicarbonates are present (if >200 mg/L). For drinking water purposes waters with results <200 mg/L are considered acceptable, results >200 mg/L are considered poor but can be tolerated. Results >500 mg/L are unacceptable.

Hydroxide See alkalinity

Magnesium See hardness. Common major cation of water chemistry. Elevated levels (>125 mg/L) may exert a cathartic or diuretic action.

pH Measure of water acidity/alkalinity. Normal range is 7.0-8.5.

Potassium Common major cation of water chemistry.

Sodium Common major cation of water chemistry. Measure of salinity (saltiness).

Sulphate Common major anion of water chemistry. Elevated levels may exert a cathartic or diuretic action.

Total Dissolved Solids A measure of water salinity.

Iron Causes staining to laundry and porcelain and astringent taste. Oxidizes to red-brown precipitate on exposure to air.

Heterotrophic

Plate Count Criteria is 500 cfu/mL Measure of heterotrophic bacteria present.

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

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

UNLESS OTHERWISE STATED. ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Environmental

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

coc Number: 17 - 763425

www.aisglobai.com		11							
Report To Contact and company name below will appear on the final report	Report Forr	nat / Discussion	r = '-		- Contact you	ur AM to conf	irm all E&P	TATs (surcharge	ss may apply)
Company: Vancouver School Brance	Select Report Format: PD	DF EXCÉL EDD (DIGITAL)	R	egular [R] 😾 Standa	rd TAT if received	d by 3 pm - bus	lness days - no	surcharges apply	
Contact: Stephen Thomas	Quality Control (QC) Report with F	Report YES NO	, ĝ 4 da	ay [P4-20%]	½ 1 Bu	siness day	[E - 100%]		
Phone: 604-713 - 5637	Compare Results to Criteria on Repo		5 € 3 da	ay [P3-25%]	Same	Dav. Week	end or Stat	tutory holiday	TE2 -200%
Company address below will appear on the final report		IL MAIL FAX	हैं <u>हैं</u> 2 da	ay [P2-50%]	⁶ (Labo	oratory oper	ing fees m	ay apply)]	
Street: 1549 Clark Dr.	Email 1 or Fax 55 thon	nas@vsb.bc.ca	Date	and Time Required for all Ed	P TATs:		dd-	mmm-yy hh:m	m
City/Province: Vancouver B.C.		vsb.bc.ca	For tests that o	can not be performed according	to the service level	l selected, you w	ill be contacted	<u>. </u>	
Postal Code:	Email 3	<u></u>			An	alysis Requ	est		
Invoice To Same as Report To X YES NO		Distribution		Indicate Filtered (F), Preserved (P) o	or Filtered and P	reserved (F/P)	below	D
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ALS Lab Work Order # (lab use only):	ALS Contact:	Sampler 21 . 1	121 4						🚡 🚼
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ALS Sample # Sample Identification and/or Coordina	tes Date	Time Sample Type	151 7						 4 <u> </u>
(fab use only) (This description will appear on the repo		(nn:mm)	Z	<u> </u>					Sus Sus
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		9 11:44 an water	 	 					
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Special Instru	ctions / Specify Criteria to add on report by	licking on the drop-down list below		SAMP	E CONDITIO	N AS RECE	IVED (lab u	use only)	
Drinking Water (DW) Samples¹ (client use)	(electronic COC only)		Frozen		SIF Observa	ations	Yes		Vo .
Are samples taken from a Regulated DW System?) :	f.	ice Packs	ice Cubes	Custody sea	al intact	Yes [No 🔲
l l yes □ No ρτ	eservatives add	ed	Cooling Ini	tiated 🗗					
Are samples for human consumption/ use?				INITIAL COOLER TEMPERA	TURES °C	ļ	FINAL	COOLER TEMPER	RATURES °C
YES NO									9
SHIPMENT RELEASE (client use)		ENT RECEPTION (lab use only)			FINAL SHIP	PMENT REC	EPTION (la	ab use only)	
Released by: Date:	Time: Received by:	Date:	Time:	Received by:	D _e	Date:	G	19	Time
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION		WHITE - LABORATORY COPY YELLO	W-CHENT C		г 	<u> </u>		<u> </u>	12,51

Results Summary VA20A5318

Project Brittania Secondary

Report To Stephen Thomas, Vancouver School Board

 Date Received
 24-Apr-2020 09:55

 Issue Date
 30-Apr-2020 11:03

Amendment

Client Sample ID			Rm. 137 SSDF	Rm. 141 SSDF	Rm. 140 SSDF	Rm. 107 DF	Rm. D-110
•						-	-
Date Sampled			24-Apr-2020	24-Apr-2020	24-Apr-2020	24-Apr-2020	24-Apr-2020
Time Sampled			08:35	08:40	08:40	08:55	08:50
ALS Sample ID			VA20A5318-001	VA20A5318-002	VA20A5318-003	VA20A5318-004	VA20A5318-005
Analyte	Lowest Detection Limit	Units	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water	Sub-Matrix: Water
Total Metals (Matrix: Water)							
lead, total	0.000050	mg/L	0.000249	0.000673	0.00428	0.00366	0.0737