

Date: 20-JUN-19

PO No.:

**WO No.:** L2292994

LSD:

Project Ref: CARNARVON ELEMENTARY

Sample ID: RM 101 Sampled By: Chris Carrell Date Collected: 17-JUN-19 **Lab Sample ID:** L2292994-1

Matrix: Water

Vancouver BC V5L 3L4 ATTN: Stephen Thomas			Matrix: Wate	er	PAGE	1 of 8
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.000454		mg/L	0.005		19-JUN-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 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	uidelines on con ter Quality	ventional treatm	ent and slow sand			ase see

Account Manager





Date: 20-JUN-19

PO No.:

**WO No.:** L2292994

LSD:

Project Ref: CARNARVON ELEMENTARY

Sample ID: RM 151 B Sampled By: Chris Carrell Date Collected: 17-JUN-19 Lab Sample ID: L2292994-2

Vancouver BC V5L 3L4 ATTN: Stephen Thomas			<b>Matrix:</b> Wat	er	PAGE	2 of 8
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.000606		mg/L	0.005		19-JUN-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 Summary Table of Guidelines for Canadian Drinking Wa  - A blank entry designates no known limit.  - A shaded value in the Results column exceeds CDWQ	guidelines on cor iter Quality	ventional treatn	nent and slow san			ase see
Approved by  Edward Ngai  Account Manager	<del></del>					







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

**Date:** 20-JUN-19

PO No.:

**WO No.:** L2292994

LSD:

Project Ref: CARNARVON ELEMENTARY

Sample ID: RM 160
Sampled By: Chris Carrell
Date Collected: 17-JUN-19
Lab Sample ID: L2292994-3

Matrix: Water

Vancouver BC V5L 3L4 ATTN: Stephen Thomas			Matrix: Wate	er	PAGE	3 of 8
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	<0.000050		mg/L	0.005		19-JUN-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 gummary Table of Guidelines for Canadian Drinking Wa  - A blank entry designates no known limit.  - A shaded value in the Results column exceeds CDWQG  Approved by  Edward Ngai	guidelines on con ter Quality	ventional treatm	ent and slow sand			ase see

Account Manager





Date: 20-JUN-19

PO No.:

**WO No.:** L2292994

LSD:

Project Ref: CARNARVON ELEMENTARY

Sample ID: RM 163 Sampled By: Chris Carrell Date Collected: 17-JUN-19 **Lab Sample ID:** L2292994-4

Matrix: Water

		watrix: wate	er	PAGE	4 of 8
Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
0.000935		mg/L	0.005		19-JUN-19
guidelines on cor ater Quality	ventional treatm	ent and slow sand			ase see
	0.000935  JUNE 2019  y. If present as N guidelines on corater Quality	JUNE 2019 y. If present as Nitrate then the liguidelines on conventional treatmeter Quality	Result Qualifier Units of Measure  0.000935 mg/L  JUNE 2019  June	Qualifier Measure MAC  0.000935 mg/L 0.005  JUNE 2019  y. If present as Nitrate then the limit is 10mg/L < or N.D. = less than deguidelines on conventional treatment and slow sand or diatomaceous eater Quality	Result Qualifier Units of CDWQG Aesthetic Measure MAC Objective  0.000935 mg/L 0.005  JUNE 2019  JU

Account Manager





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

**Date:** 20-JUN-19

PO No.:

**WO No.:** L2292994

LSD:

Project Ref: CARNARVON ELEMENTARY

Sample ID: RM 110
Sampled By: Chris Carrell
Date Collected: 17-JUN-19
Lab Sample ID: L2292994-5

1549 Clark Drive Vancouver BC V5L 3L4 ATTN: Stephen Thomas			Matrix: Wat	er	PAGE	5 of 8
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.000830		mg/L	0.005		19-JUN-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 g Summary Table of Guidelines for Canadian Drinking Wat  - A blank entry designates no known limit.  - A shaded value in the Results column exceeds CDWQC	uidelines on con er Quality	ventional treatm	ent and slow san			se see
Approved by  Edward Ngai  Account Manager						





Date: 20-JUN-19

PO No.:

**WO No.:** L2292994

LSD:

Project Ref: CARNARVON ELEMENTARY

Sample ID: RM 132 Sampled By: Chris Carrell Date Collected: 17-JUN-19 Lab Sample ID: L2292994-6

Matrix: Wa

Vancouver BC V5L 3L4 ATTN: Stephen Thomas			<b>Matrix:</b> Wat	er	PAGE	6 of 8
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	<0.000050		mg/L	0.005		19-JUN-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 Summary Table of Guidelines for Canadian Drinking Wa  - A blank entry designates no known limit.  - A shaded value in the Results column exceeds CDWQ	guidelines on cor iter Quality	ventional treatm	ent and slow san			ase see
Approved by  Edward Ngai  Account Manager						

Account Manager





Date: 20-JUN-19

PO No.:

**WO No.:** L2292994

LSD:

Project Ref: CARNARVON ELEMENTARY

Sample ID: RM 139 Sampled By: Chris Carrell Date Collected: 17-JUN-19 Lab Sample ID: L2292994-7

Vancouver BC V5L 3L4 ATTN: Stephen Thomas			Matrix: Wate	er	PAGE	7 of 8
Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.0109		mg/L	0.005		19-JUN-19
CDWQG = Health Canada Guideline Limits updated	JUNE 2019					
<ul> <li>* CDWQG for Nitrate+Nitrite-N is the limit for nitrate only</li> <li>* Turbidity guideline based on membrane filtration. For Summary Table of Guidelines for Canadian Drinking Wa-A blank entry designates no known limit.</li> <li>- A shaded value in the Results column exceeds CDWG</li> </ul>	guidelines on con ater Quality	ventional treatm	ent and slow sand	N.D. = less than de or diatomaceous e	tection limit. earth filtration plea	se see
Approved by  Edward Ngai  Account Manager	<del>_</del>					



## **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.

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

\*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 See Alkalinity. Report as the anion HCO3-1 Bicarbonate See Alkalinity. Reported at the anion CO3-2 Carbonate

See Hardness. Common major cation of water chemistry.

Chloride Common major anion of water chemistry.

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

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

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

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).

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

**Total Dissolved Solids** A measure of water salinity.

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

Elevated levels may cause staining of laundry and porcelain. Manganese

Heterotrophic

Calcium

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.



# Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 17 - 765843

	www.alsglobal.com								J.								
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