

Date:	15-SEP-17
PO No.:	0000132962
WO No.:	L1988743
LSD:	
Project Ref:	
Sample ID:	CARR A007 DF
Sampled By:	
Date Collected:	08-SEP-17
Lab Sample ID:	L1988743-1
Matrix:	Water

14

Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyze
Total Metals Lead (Pb)-Total	0.00363	2	mg/L	0.01		14-SEP-*
DWQG = Health Canada Guideline Limits updated CDWQG for Nitrate+Nitrite-N is the limit for nitrate onl Turbidity guideline based on membrane filtration. For ummary Table of Guidelines for Canadian Drinking W A blank entry designates no known limit. A shaded value in the Results column exceeds CDWC	y. If present as N guidelines on con ater Quality	itrate then the lin ventional treatme	ent and slow sand	N.D. = less than de or diatomaceous e	tection limit. arth filtration ple	ase see
Approved by <u>HMCKenyi</u> Heather McKenzie Account Manager	k:					
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ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700 ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company



 Date:
 15-SEP-17

 PO No.:
 0000132962

 WO No.:
 L1988743

 LSD:

 Project Ref:

 Sample ID:
 CARR B110 DF

 Sampled By:

 Date Collected:
 08-SEP-17

 Lab Sample ID:
 L1988743-2

 Matrix:
 Water

Total Metals       0.00310       mg/L       0.01         CDWQG F Health Canada Guideline Limits updated       DECEMBER 2015       •       •         * CDWQG for Nitrate+Nitrike-N is the limit for nitrate only. If present as Nitrate then the limit is 10mg/L < or N.D. = less than detection limit.       •         * Unbiddy guideline based on nembrane filtration. For guidelines on conventional treatment and slow sand or diatomaceous earth filtration 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       Heather McKenzie Account Manager       •         Account Manager       •       •		Aesthetic Objective	CDWQG MAC	Units of Measure	Qualifier	Result	Test Description
CDWQG for Nitrate+Nitrite-N is the limit for nitrate only. If present as Nitrate then the limit is 10mg/L < or N.D. = less than detection limit.	14-SEP-*		0.01	mg/L		0,00310	
CDWQG for Nitrate+Nitrite-N is the limit for nitrate only. If present as Nitrate then the limit is 10mg/L < or N.D. = less than detection limit. Turbidity guideline based on membrane filtration. For guidelines on conventional treatment and slow sand or diatomaceous earth filtration 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 <u>Human</u> Heather McKenzie					R 2015	DECEMBER	WQG = Health Canada Guideline Limits updated
Heather McKenzie	please see	ection limit. arth filtration ple	I.D. = less than det or diatomaceous ea	ent and slow sand	Nitrate then the lir conventional treatm	. If present as N guidelines on con ter Quality	DWQG for Nitrate+Nitrite-N is the limit for nitrate only irbidity guideline based on membrane filtration. For g nmary Table of Guidelines for Canadian Drinking Wat blank entry designates no known limit.
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 Date:
 15-SEP-17

 PO No.:
 0000132962

 WO No.:
 L1988743

 LSD:
 Sample ID:

 Sample ID:
 CARR 002 DF

 Sampled By:
 08-SEP-17

 Lab Sample ID:
 L1988743-3

 Matrix:
 Water

Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.00530		mg/L	0.01		14-SEP-1
DWQG = Health Canada Guideline Limits updated	DECEMBER 2	2015				
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.	guidelines on con iter Quality	ventional treatm	ent and slow sand	N.D. = less than de or diatomaceous e	tection limit. arth filtration ple	ase see
A shaded value in the Results column exceeds CDWQ	G MAC and/ or A	esthetic Objecti	ve.			
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Approved by Heather McKenzie Account Manager	-					
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 Date:
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 0000132962

 WO No.:
 L1988743

 LSD:

 Project Ref:

 Sample ID:
 CARR B110 DF

 Sampled By:

 Date Collected:
 08-SEP-17

 Lab Sample ID:
 L1988743-4

 Matrix:
 Water

CDWQG Units of Aesthetic Date **Test Description** Result Qualifier Measure MAC Objective Analyzed **Total Metals** Lead (Pb)-Total 0.00160 14-SEP-17 mg/L 0.01 **DECEMBER 2015** CDWQG = Health Canada Guideline Limits updated \* CDWQG for Nitrate+Nitrite-N is the limit for nitrate only. If present as Nitrate then the limit is 10mg/L < or N.D. = less than detection 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 Allemi Heather McKenzie Account Manager ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700 ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

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 Date:
 15-SEP-17

 PO No.:
 0000132962

 WO No.:
 L1988743

 LSD:

 Project Ref:

 Sample ID:
 CARR A009 SS DF

 Sampled By:

 Date Collected:
 08-SEP-17

 Lab Sample ID:
 L1988743-5

 Matrix:
 Water

Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Total Metals Lead (Pb)-Total	0.000191		mg/L	0.01		14-SEP-1
DWQG = Health Canada Guideline Limits updated	DECEMBER	2015				
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 ter Quality	ventional treatme	ent and slow sand o	.D. = less than dete or diatomaceous ea	ection limit. rth filtration plea	ase see
Approved by AMGKenzi						
Heather McKenzie Account Manager	_					
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Date: PO No.: WO No.:	15-SEP-17 0000132962 L1988743	
LSD:		
Project Ref:		
Sample ID:	CARR B130 DF	Fountain no
Sampled By:		longer in service
Date Collected:	08-SEP-17	
Lab Sample ID:	L1988743-6	
Matrix:	Water	

Total Metals     0.00267     mg/L     0.01     14-SEP-17       CDWQC Health Canada Guidelina Limits updata     DECEMBER 2015          1 CDWQC Go Nitrite Nitrite-Nis the limit for initize only. If present as Nitrite then the limit is 10mg/L < or ND. = less than detection limit.         1 CDWCd Go Nitrite Nitrite-Nis for Canadia Dhifking Weler Qualiy:           2 Abink entry designates no known limit.            3 Abink entry designates no known limit.             4 Abink entry designates no known limit.             4 Abink entry designates no known limit.             4 Abink entry designates no known limit.             Approved by Heather McKenzie               Account Manager	Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
CDWQG = Health Canada Guideline Limits updated       DECEMBER 2015         * CDWQG for Nitrate+Nitrite-N is the limit for nitrate only. If present as Nitrate then the limit is 10mg/L < or N.D. = less than detection limit.	Total Metals						
<ul> <li>* CDWQG for Nitrate+Nitrite-N is the limit for nitrate only. If present as Nitrate then the limit is 10mg/L &lt; or N.D. = less than detection limit.</li> <li>* 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</li> <li>A blank entry designates no known limit.</li> <li>A shaded value in the Results column exceeds CDWQG MAC and/ or Aesthetic Objective.</li> </ul>	Lead (Pb)-Total	0.00267		mg/L	0.01		14-SEP-17
<ul> <li>* 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         <ul> <li>A blank entry designates no known limit.</li> <li>A shaded value in the Results column exceeds CDWQG MAC and/ or Aesthetic Objective.</li> </ul> </li> <li>Approved by <u>Huffengue</u> Heather McKenzie</li> </ul>	CDWQG = Health Canada Guideline Limits updated	DECEMBER	2015				
Heather McKenzie	<ul> <li>* Turbidity guideline based on membrane filtration. For g Summary Table of Guidelines for Canadian Drinking Wat</li> <li>- A blank entry designates no known limit.</li> </ul>	uidelines on co er Quality	nventional treatm	ent and slow sand	I.D. = less than de or diatomaceous e	lection limit. arth filtration plea	ase see
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## **Guidelines & Objectives**

Health Canada MAC Heal Nitrate/Nitrite-N* Lead* Fluoride* Total Coliforms* E. Coli*	th Related Criteria Limits 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. A cumulative body poison, uncommon in naturally occurring hard waters. Present in fluoridated water supplies at 0.8 mg/L to reduce dental caries. Elevated levels causes fluorosis (mottling of teeth). Criteria is 0 CFU/100mL. Adverse health effects. Criteria is 0 CFU/100 mL. Certain E. Coli bacteria can be life threatening.
*Health Canada Canadian	Drinking Water Quality Guidelines (MAC limit)
Aesthetic Objective Conc	entration 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.
pН	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.
Manganese	Elevated levels may cause staining of laundry and porcelain.
Heterotrophic	

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.

Plate Count

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.