

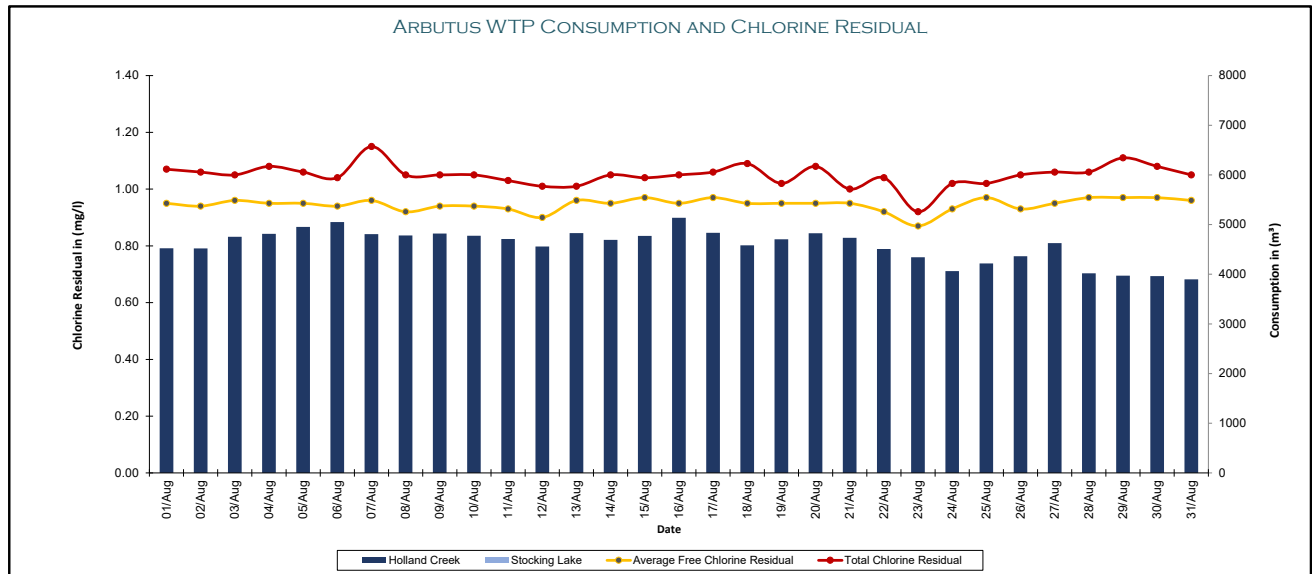
TOWN OF LADYSMITH - ARBUTUS WATER TREATMENT PLANT

AUGUST 2026 - MONTHLY REPORT

Date	Daily Flow			Chlorine Residual				CT*	External Lab Testing					
	Stocking Lake	Holland Creek	Combined Flow	Free Min	Free Max	Free Avg	Total		HPC	E.coli	Total Coliforms	Aluminum	THM	HAA
	m³	m³	m³	mg/l	mg/l	mg/l	mg/l		CFU	MPN	MPN	mg/l	mg/l	mg/l
01-Aug	0	4522	4522	0.93	0.96	0.95	1.07	167						
02-Aug	0	4521	4521	0.92	0.95	0.94	1.06	231						
03-Aug	0	4753	4753	0.93	0.97	0.96	1.05	246						
04-Aug	0	4814	4814	0.93	0.98	0.95	1.08	130	< 1	< 1	< 1	0.0155	0.0144	0.0832
05-Aug	0	4954	4954	0.94	0.97	0.95	1.06	126						
06-Aug	0	5050	5050	0.92	0.95	0.94	1.04	148						
07-Aug	0	4808	4808	0.92	0.97	0.96	1.15	203						
08-Aug	0	4782	4782	0.92	0.96	0.92	1.05	155						
09-Aug	0	4819	4819	0.91	0.95	0.94	1.05	177						
10-Aug	0	4776	4776	0.92	0.96	0.94	1.05	158						
11-Aug	0	4710	4710	0.92	0.94	0.93	1.03	164	< 1	< 1	< 1			
12-Aug	0	4559	4559	0.90	0.94	0.90	1.01	133						
13-Aug	0	4829	4829	0.89	0.96	0.96	1.01	153						
14-Aug	0	4691	4691	0.94	0.97	0.95	1.05	154						
15-Aug	0	4771	4771	0.94	0.98	0.97	1.04	183						
16-Aug	0	5137	5137	0.95	0.98	0.95	1.05	127						
17-Aug	0	4833	4833	0.93	0.98	0.97	1.06	122						
18-Aug	0	4582	4582	0.94	0.98	0.95	1.09	144	< 1	< 1	< 1			
19-Aug	0	4705	4705	0.92	0.96	0.95	1.02	112						
20-Aug	0	4825	4825	0.94	0.96	0.95	1.08	195						
21-Aug	0	4733	4733	0.92	0.96	0.95	1.00	165						
22-Aug	0	4507	4507	0.94	0.96	0.92	1.04	162						
23-Aug	0	4343	4343	0.82	0.93	0.87	0.92	184						
24-Aug	0	4063	4063	0.87	0.93	0.93	1.02	166						
25-Aug	0	4218	4218	0.92	0.97	0.97	1.02	137	< 1	< 1	< 1			
26-Aug	0	4362	4362	0.93	0.98	0.93	1.05	162						
27-Aug	0	4627	4627	0.92	0.96	0.95	1.06	141						
28-Aug	0	4019	4019	0.93	0.98	0.97	1.06	155						
29-Aug	0	3971	3971	0.96	0.98	0.97	1.11	172						
30-Aug	0	3962	3962	0.96	0.98	0.97	1.08	174						
31-Aug	0	3896	3896	0.94	0.97	0.96	1.05	177						

*CT - Recorded as the minimum value at the highest daily flow ** Manual Residual were not taken

Total	0	142142	142142											
Average	0	4585	4585	0.92	0.96	0.95	1.05	162	< 1	< 1	< 1	0.0155	0.0144	0.08320



Town of Ladysmith Arbutus DWTP
Monthly LRV and Turbidity Report
08/01/2026 - 09/01/2026

LRV Monthly Average

Asset	Parameter	Health	Avg	Std. Dev	Points	LL	L	%In	% between L and LL	% < LL	Unit
UF 1	LRV		5.0	0.0	33	4.25	4.5	100 %	0 %	0 %	#
UF 2	LRV		5.0	0.0	32	4.25	4.5	100 %	0 %	0 %	#
UF 3	LRV		5.0	0.0	32	4.25	4.5	100 %	0 %	0 %	#

LRV Daily Values

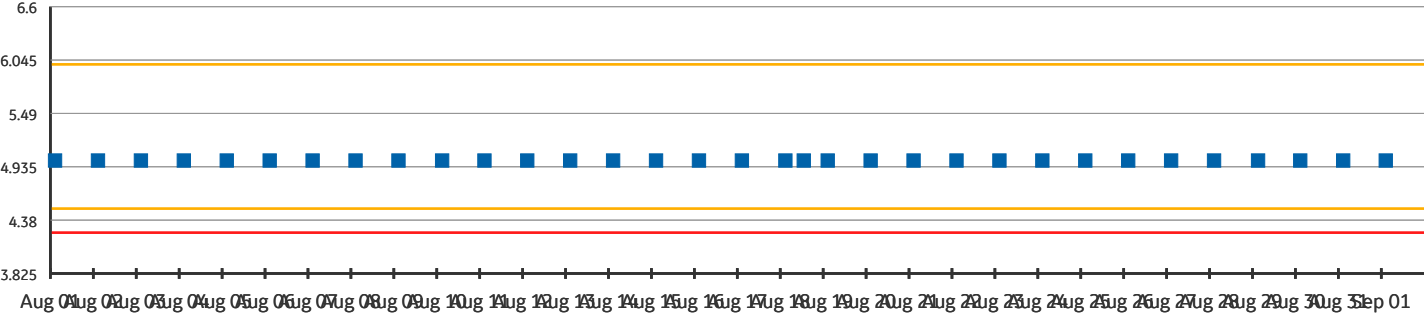
Asset	Parameter	Aug 01	Aug 02	Aug 03	Aug 04	Aug 05	Aug 06	Aug 07	Aug 08	Aug 09	Aug 10	Aug 11	Aug 12
UF 1	LRV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
UF 2	LRV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
UF 3	LRV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Asset	Aug 13	Aug 14	Aug 15	Aug 16	Aug 17	Aug 18	Aug 19	Aug 20	Aug 21	Aug 22	Aug 23	Aug 24	Aug 25	Aug 26	Aug 27	Aug 28
UF 1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
UF 2	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
UF 3	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

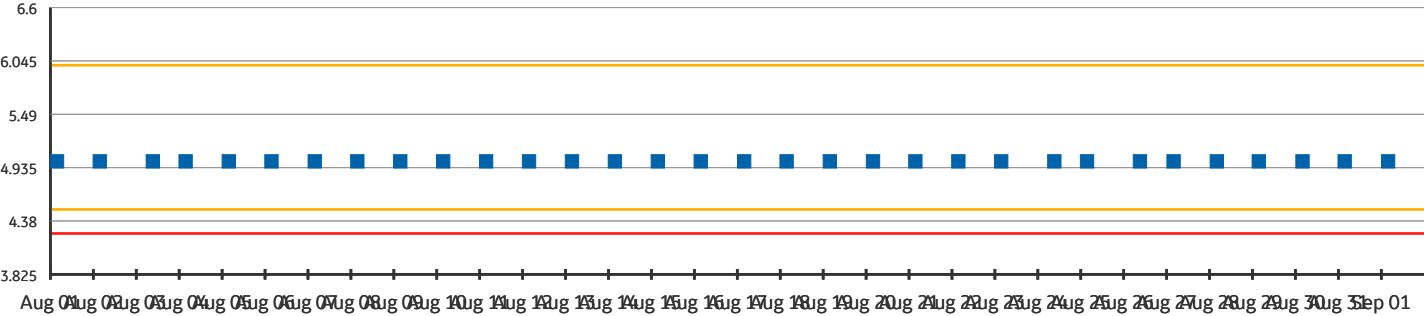
Asset	Aug 29	Aug 30	Aug 31	Sep 01
UF 1	5.0	5.0	5.0	5.0
UF 2	5.0	5.0	5.0	5.0
UF 3	5.0	5.0	5.0	5.0

LRV Raw Data

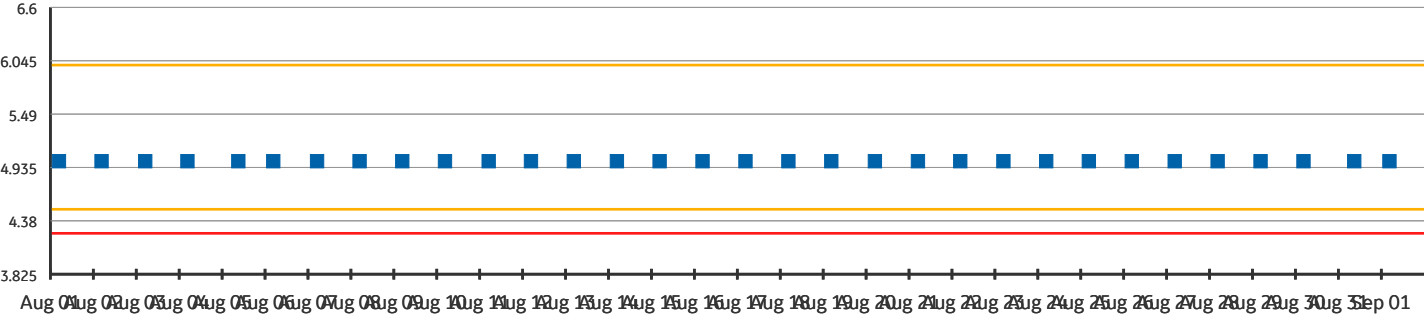
UF 1 - LRV (#)



UF 2 - LRV (#)



UF 3 - LRV (#)



Turbidity Monthly Average

Asset	Parameter	Health	Avg	Std. Dev	Points	H	HH	%In	% between H and HH	% > HH	Unit
UF 1	PermeateTurbidity		0.013	0.0	45103	--	--	100 %	0 %	0 %	NTU
UF 2	PermeateTurbidity		0.014	0.0	45103	--	--	100 %	0 %	0 %	NTU
UF 3	PermeateTurbidity		0.016	0.01	45103	--	--	100 %	0 %	0 %	NTU
UF 1	PermeateTurbidityAfterBP	●	0.013	0.0	478	0.1	0.3	100 %	0 %	0 %	NTU
UF 2	PermeateTurbidityAfterBP	●	0.014	0.0	552	0.1	0.3	100 %	0 %	0 %	NTU
UF 3	PermeateTurbidityAfterBP	●	0.016	0.01	537	0.1	0.3	100 %	0 %	0 %	NTU

Turbidity Daily Averages

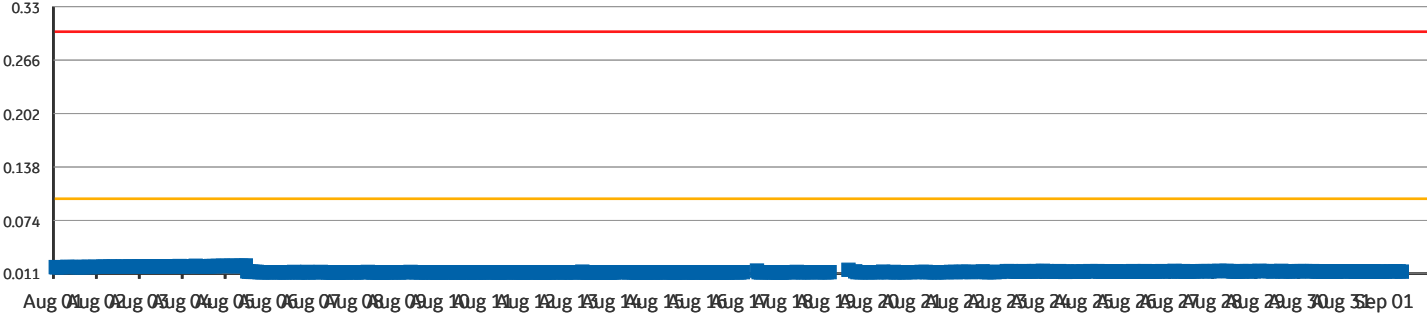
Asset	Parameter	Aug 01	Aug 02	Aug 03	Aug 04	Aug 05	Aug 06	Aug 07	Aug 08	Aug 09	Aug 10	Aug 11
UF 1	PermeateTurbidity	0.018	0.019	0.019	0.019	0.016	0.012	0.012	0.012	0.012	0.012	0.012
UF 2	PermeateTurbidity	0.019	0.02	0.02	0.02	0.017	0.013	0.013	0.013	0.013	0.013	0.012
UF 3	PermeateTurbidity	0.029	0.03	0.031	0.032	0.022	0.012	0.012	0.012	0.012	0.012	0.012
UF 1	PermeateTurbidityAfterBP	0.018	0.019	0.019	0.019	0.016	0.012	0.012	0.012	0.012	0.012	0.012
UF 2	PermeateTurbidityAfterBP	0.02	0.02	0.02	0.02	0.017	0.013	0.013	0.013	0.012	0.012	0.012
UF 3	PermeateTurbidityAfterBP	0.03	0.03	0.031	0.032	0.018	0.012	0.012	0.012	0.012	0.012	0.012

Asset	Aug 12	Aug 13	Aug 14	Aug 15	Aug 16	Aug 17	Aug 18	Aug 19	Aug 20	Aug 21	Aug 22	Aug 23	Aug 24	Aug 25	Aug 26
UF 1	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.013	0.012	0.012	0.012	0.013	0.013	0.013	0.013
UF 2	0.013	0.013	0.012	0.012	0.012	0.012	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
UF 3	0.012	0.012	0.012	0.012	0.012	0.012	0.013	0.013	0.013	0.013	0.013	0.014	0.014	0.015	0.015
UF 1	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.013	0.012	0.012	0.012	0.013	0.013	0.013	0.013
UF 2	0.013	0.013	0.013	0.012	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
UF 3	0.012	0.012	0.012	0.012	0.012	0.013	0.013	0.013	0.013	0.013	0.013	0.014	0.015	0.015	0.015

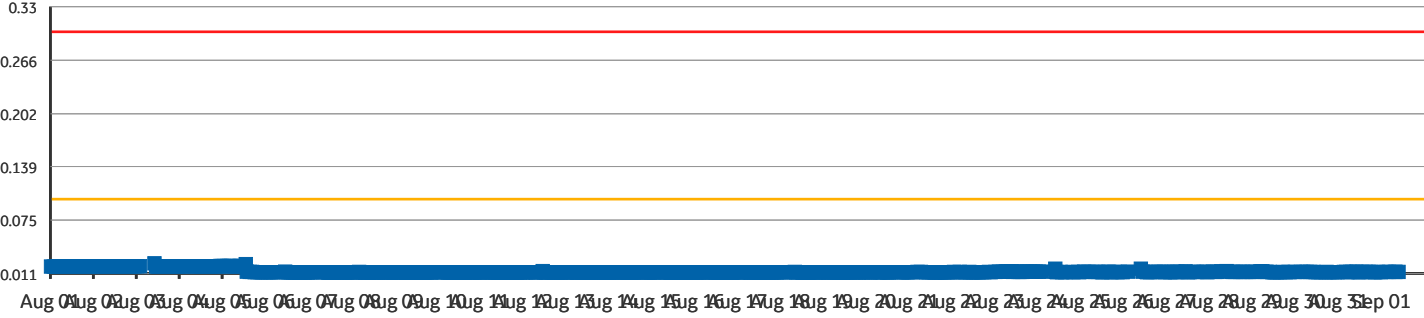
Asset	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 01
UF 1	0.013	0.013	0.013	0.013	0.013	0.013
UF 2	0.013	0.013	0.013	0.013	0.013	0.013
UF 3	0.015	0.016	0.016	0.016	0.017	0.016
UF 1	0.013	0.013	0.013	0.013	0.013	0.013
UF 2	0.013	0.013	0.013	0.013	0.013	0.013
UF 3	0.015	0.016	0.016	0.016	0.017	0.016

Turbidity Raw Data

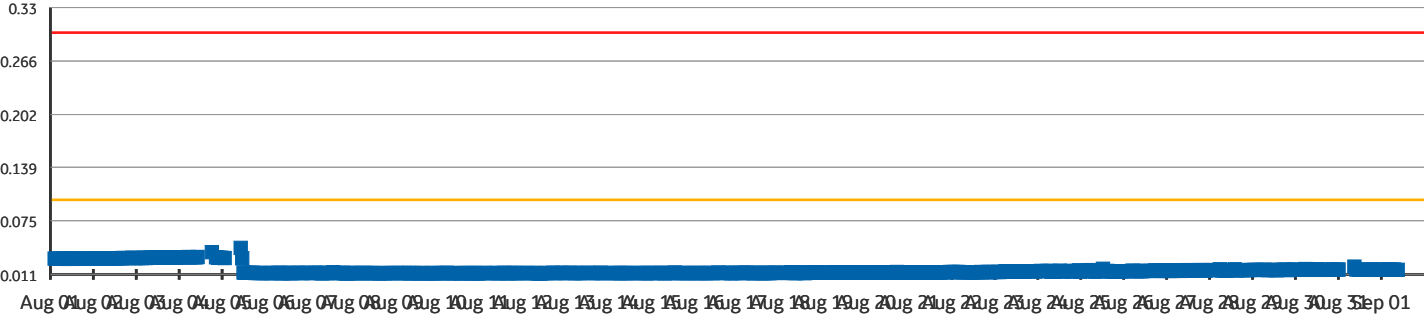
UF 1 - PermeateTurbidityAfterBP (NTU)



UF 2 - PermeateTurbidityAfterBP (NTU)



UF 3 - PermeateTurbidityAfterBP (NTU)



CERTIFICATE OF ANALYSIS

Work Order	: VA26C0884		
Client	: Town of Ladysmith	Laboratory	: ALS Environmental - Vancouver
Contact	: Shawn Baker	Account Manager	: Kevin Bhikadia
Address	: 410 Esplanade PO Box 220 Ladysmith British Columbia Canada V9G 1A2	Address	: 8081 Lougheed Highway Burnaby BC Canada V5A 1W9
Telephone	: ----	E-mail	: Kevin.Bhikadia@alsglobal.com
Project	: Arbutus Water Treatment Plant-Monthly Sampling	Telephone	: +1 604 253 4188
PO	: 10940	Date Samples Received	: 05-Aug-2026 10:45
C-O-C number	: ----	Date Analysis Commenced	: 06-Aug-2026
Sampler	: ----	Issue Date	: 11-Aug-2026 13:56
Site	: Town of Ladysmith		
Quote number	: Town of Ladysmith Standing Offer		
No. of samples received	: 1		
No. of samples analysed	: 1		

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
- Surrogate Control Limits

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>
Angela Ren	Team Leader - Metals	Metals, Burnaby, British Columbia
Catherine DeMone	Laboratory Analyst	LCMS, Waterloo, Ontario
Robin Weeks	Supervisor - Organics Extractions	Organics, Burnaby, British Columbia



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
mg/L	milligrams per litre
µg/L	micrograms per litre

<: 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
 (Matrix: Water)

Client sample ID					Treated Water (post reservoir)	----	----	----	----
Client sampling date / time					04-Aug-2026 10:30	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA26C0884-001	----	----	----	----
					Result	----	----	----	----
Total Metals									
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0155	----	----	----	----
Volatile Organic Compounds [THMs]									
Bromodichloromethane	75-27-4	E611B/VA	1.0	µg/L	1.8	----	----	----	----
Bromoform	75-25-2	E611B/VA	1.0	µg/L	<1.0	----	----	----	----
Chloroform	67-66-3	E611B/VA	1.0	µg/L	12.6	----	----	----	----
Dibromochloromethane	124-48-1	E611B/VA	1.0	µg/L	<1.0	----	----	----	----
Trihalomethanes [THMs], total	----	E611B/VA	2.0	µg/L	14.4	----	----	----	----
Volatile Organic Compounds [THMs] Surrogates									
Bromofluorobenzene, 4-	460-00-4	E611B/VA	1.0	%	95.1	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611B/VA	1.0	%	101	----	----	----	----
Haloacetic Acids									
Bromochloroacetic acid	5589-96-8	E750/WT	1.00	µg/L	<1.00	----	----	----	----
Dibromoacetic acid	631-64-1	E750/WT	1.00	µg/L	<1.00	----	----	----	----
Dichloroacetic acid	79-43-6	E750/WT	1.00	µg/L	4.05	----	----	----	----
Monobromoacetic acid	79-08-3	E750/WT	1.00	µg/L	<1.00	----	----	----	----
Monochloroacetic acid	79-11-8	E750/WT	1.00	µg/L	<1.00	----	----	----	----
Trichloroacetic acid	76-03-9	E750/WT	1.00	µg/L	4.27	----	----	----	----
Haloacetic acids, total [HAA5]	n/a	E750/WT	5.00	µg/L	8.32	----	----	----	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

Quality Control Interpretive Report

Work Order : VA26C0884

Client : Town of Ladysmith
Contact : Shawn Baker
Address : 410 Esplanade PO Box 220
Ladysmith BC Canada V9G 1A2
Telephone : ----
Project : Arbutus Water Treatment Plant-Monthly Sampling
PO : 10940
C-O-C number : ----
Sampler : ----
Site : Town of Ladysmith
Quote number : Town of Ladysmith Standing Offer
No. of samples received : 1
No. of samples analysed : 1

Laboratory : ALS Environmental - Vancouver
Account Manager : Kevin Bhikadia
Address : 8081 Lougheed Highway
Burnaby British Columbia Canada V5A 1W9
Telephone : +1 604 253 4188
Date Samples Received : 05-Aug-2026 10:45
Issue Date : 11-Aug-2026 13:55

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 Services 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 Laboratory Control Sample Duplicate (LCSD) outliers occur
- No Matrix Spike outliers occur.
- No Matrix Spike Duplicate (MSD) 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.

CERTIFICATE OF ANALYSIS

Work Order	: VA26C0882	Laboratory	: ALS Environmental - Vancouver
Client	: Town of Ladysmith	Account Manager	: Kevin Bhikadia
Contact	: Shawn Baker	Address	: 8081 Lougheed Highway
Address	: 410 Esplanade PO Box 220 Ladysmith British Columbia Canada V9G 1A2		: Burnaby BC Canada V5A 1W9
Telephone	: ----	E-mail	: Kevin.Bhikadia@alsglobal.com
Project	: Arbutus Water Treatment Plant - Weekly Sampling	Telephone	: +1 604 253 4188
PO	: 10940	Date Samples Received	: 05-Aug-2026 10:45
C-O-C number	: ----	Date Analysis Commenced	: 05-Aug-2026
Sampler	: ----	Issue Date	: 11-Aug-2026 13:55
Site	: Town of Ladysmith		
Quote number	: Town of Ladysmith Standing Offer		
No. of samples received	: 4		
No. of samples analysed	: 4		

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>
Lia Xie	Lab Assistant	Inorganics, Burnaby, British Columbia
Lindsay Gung	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
Lindsay Gung	Department Manager - Inorganics	Microbiology, Burnaby, British Columbia



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.

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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
-	no units
CFU/mL	colony forming units per millilitre
CU	colour units (1 cu = 1 mg/l pt)
mg/L	milligrams per litre
MPN/100mL	most probable number per hundred millilitres
NTU	nephelometric turbidity units
pH units	pH units
µS/cm	microsiemens per centimetre

<: 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.

Workorder Comments

Sample name: Treated Water (post reservoir)" Exceeded Recommended Holding Time prior to receipt at the lab for Microbiology analysis. Please check the PM for any other concerns.

Work Order : VA26C0882
Client : Town of Ladysmith
Project : Arbutus Water Treatment Plant - Weekly Sampling





Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	Raw Water ----	DAF Effluent ----	UF Effluent ----	Treated Water (post reservoir) ----	----
Client sampling date / time						04-Aug-2026 10:30	04-Aug-2026 10:30	04-Aug-2026 10:30	04-Aug-2026 10:30	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA26C0882-001	VA26C0882-002	VA26C0882-003	VA26C0882-004	----
						Result	Result	Result	Result	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/VA	-	-	lab	lab	lab	lab	----	----
Physical Tests										
Alkalinity, total (as CaCO3)	----	E290/VA	1.0	mg/L	----	----	----	----	12.0	----
Colour, true	----	E329/VA	5.0	CU	----	----	----	----	<5.0	----
Conductivity	----	E100/VA	2.0	µS/cm	----	----	----	----	56.7	----
pH	----	E108/VA	0.10	pH units	----	----	----	----	7.42	----
Turbidity	----	E121/VA	0.10	NTU	----	----	----	----	<0.10	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	2.29	1.22	0.94	----	----	----
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L	2.33	1.46	1.20	----	----	----
Microbiological Tests										
Heterotrophic plate count [HPC]	----	E020/VA	1	CFU/mL	----	----	----	----	<1	----
Coliforms, Escherichia coli [E. coli]	----	E010/VA	1	MPN/100 mL	----	----	----	----	<1	----
Coliforms, total	----	E010/VA	1	MPN/100 mL	----	----	----	----	<1	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

Quality Control Interpretive Report

Work Order : VA26C0882

Client : Town of Ladysmith
Contact : Shawn Baker
Address : 410 Esplanade PO Box 220
Ladysmith BC Canada V9G 1A2
Telephone : ----
Project : Arbutus Water Treatment Plant - Weekly Sampling
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Date Samples Received : 05-Aug-2026 10:45
Issue Date : 11-Aug-2026 13:56

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

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CAS Number: Chemical Abstracts Services 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 Laboratory Control Sample Duplicate (LCSD) outliers occur
- No Matrix Spike outliers occur.
- No Matrix Spike Duplicate (MSD) 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.

Outliers : Frequency of Quality Control Samples

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

CERTIFICATE OF ANALYSIS

Work Order	: VA26C1845		
Client	: Town of Ladysmith	Laboratory	: ALS Environmental - Vancouver
Contact	: Shawn Baker	Account Manager	: Kevin Bhikadia
Address	: 410 Esplanade PO Box 220 Ladysmith British Columbia Canada V9G 1A2	Address	: 8081 Lougheed Highway Burnaby BC Canada V5A 1W9
Telephone	: ----	E-mail	: Kevin.Bhikadia@alsglobal.com
Project	: Arubtus Water Treatment Plant - Weekly Sampling	Telephone	: +1 604 253 4188
PO	: 10977	Date Samples Received	: 12-Aug-2026 10:20
C-O-C number	: ----	Date Analysis Commenced	: 12-Aug-2026
Sampler	: ----	Issue Date	: 20-Aug-2026 15:25
Site	: Town of Ladysmith		
Quote number	: Town of Ladysmith Standing Offer		
No. of samples received	: 4		
No. of samples analysed	: 4		

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>
Ashwini Kashyap	Lab Assistant	Inorganics, Burnaby, British Columbia
Dat Ha	Analyst- General	Inorganics, Burnaby, British Columbia
Miles Gropen	Department Manager - Inorganics	Microbiology, Burnaby, British Columbia
Rebecca Sit	Supervisor - Organics Extractions	Inorganics, Burnaby, British Columbia



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.

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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
-	no units
CFU/mL	colony forming units per millilitre
CU	colour units (1 cu = 1 mg/l pt)
mg/L	milligrams per litre
MPN/100mL	most probable number per hundred millilitres
NTU	nephelometric turbidity units
pH units	pH units
µS/cm	microsiemens per centimetre

<: 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.

Workorder Comments

Sample Treated Water (post reservoir): HPC Exceeded Recommended Holding Time prior to receipt at the lab for Microbiology analysis. Testing will proceed unless notified otherwise.



Qualifiers

Qualifier	Description
SFP	Sample was filtered and preserved at the laboratory.



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Raw Water ----	DAF Effluent ----	UF Effluent ----	Treated Water (post reservoir) ----	----
Client sample ID									
Client sampling date / time					11-Aug-2026 10:30	11-Aug-2026 10:30	11-Aug-2026 10:30	11-Aug-2026 10:30	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA26C1845-001	VA26C1845-002	VA26C1845-003	VA26C1845-004	----
					Result	Result	Result	Result	----
Sample Preparation									
Dissolved carbon filtration location	----	EP358/VA	-	-	field	field	field	----	----
Physical Tests									
Alkalinity, total (as CaCO3)	----	E290/VA	1.0	mg/L	----	----	----	12.6	----
Colour, true	----	E329/VA	5.0	CU	----	----	----	<5.0	----
Conductivity	----	E100/VA	2.0	µS/cm	----	----	----	56.5	----
pH	----	E108/VA	0.10	pH units	----	----	----	7.34	----
Turbidity	----	E121/VA	0.10	NTU	----	----	----	<0.10	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	2.10	1.16 ^{SFP}	0.98 ^{SFP}	----	----
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L	2.41	1.32	1.22	----	----
Microbiological Tests									
Heterotrophic plate count [HPC]	----	E020/VA	1	CFU/mL	----	----	----	<1	----
Coliforms, Escherichia coli [E. coli]	----	E010/VA	1	MPN/100 mL	----	----	----	<1	----
Coliforms, total	----	E010/VA	1	MPN/100 mL	----	----	----	<1	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

Quality Control Interpretive Report

Work Order : VA26C1845

Client : Town of Ladysmith
Contact : Shawn Baker
Address : 410 Esplanade PO Box 220
Ladysmith BC Canada V9G 1A2
Telephone : ----
Project : Arubtus Water Treatment Plant - Weekly Sampling
PO : 10977
C-O-C number : ----
Sampler : ----
Site : Town of Ladysmith
Quote number : Town of Ladysmith Standing Offer
No. of samples received : 4
No. of samples analysed : 4

Laboratory : ALS Environmental - Vancouver
Account Manager : Kevin Bhikadia
Address : 8081 Lougheed Highway
Burnaby British Columbia Canada V5A 1W9
Telephone : +1 604 253 4188
Date Samples Received : 12-Aug-2026 10:20
Issue Date : 20-Aug-2026 15:23

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.

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CAS Number: Chemical Abstracts Services 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 Laboratory Control Sample Duplicate (LCSD) outliers occur
- No Matrix Spike outliers occur.
- No Matrix Spike Duplicate (MSD) 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.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

CERTIFICATE OF ANALYSIS

Work Order	: VA26C2761	Laboratory	: ALS Environmental - Vancouver
Client	: Town of Ladysmith	Account Manager	: Kevin Bhikadia
Contact	: Shawn Baker	Address	: 8081 Lougheed Highway
Address	: 410 Esplanade PO Box 220 Ladysmith British Columbia Canada V9G 1A2		: Burnaby BC Canada V5A 1W9
Telephone	: ----	E-mail	: Kevin.Bhikadia@alsglobal.com
Project	: Arbutus Water Treatment - Weekly Sampling	Telephone	: +1 604 253 4188
PO	: 10940	Date Samples Received	: 19-Aug-2026 11:00
C-O-C number	: ----	Date Analysis Commenced	: 19-Aug-2026
Sampler	: ----	Issue Date	: 26-Aug-2026 15:33
Site	: Town of Ladysmith		
Quote number	: Town of Ladysmith Standing Offer		
No. of samples received	: 4		
No. of samples analysed	: 4		

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.

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- Analytical Results

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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>
Lia Xie	Lab Assistant	Inorganics, Burnaby, British Columbia
Lindsay Gung	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
Miles Gropen	Department Manager - Inorganics	Microbiology, Burnaby, British Columbia



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
-	no units
CFU/mL	colony forming units per millilitre
CU	colour units (1 cu = 1 mg/l pt)
mg/L	milligrams per litre
MPN/100mL	most probable number per hundred millilitres
NTU	nephelometric turbidity units
pH units	pH units
µS/cm	microsiemens per centimetre

<: 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.

Workorder Comments

Exceeded Recommended Holding Time prior to receipt at the lab for HPC analysis.

Work Order : VA26C2761
Client : Town of Ladysmith
Project : Arbutus Water Treatment - Weekly Sampling





Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Raw Water ----	DAF Effluent ----	UF Effluent ----	Treated Water (post reservoir) ----	----
Client sampling date / time						18-Aug-2026 10:30	18-Aug-2026 10:30	18-Aug-2026 10:30	18-Aug-2026 10:30	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA26C2761-001	VA26C2761-002	VA26C2761-003	VA26C2761-004	----
						Result	Result	Result	Result	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/VA	-	-	lab	lab	lab	lab	----	----
Physical Tests										
Alkalinity, total (as CaCO3)	----	E290/VA	1.0	mg/L	----	----	----	----	13.3	----
Colour, true	----	E329/VA	5.0	CU	----	----	----	----	<5.0	----
Conductivity	----	E100/VA	2.0	µS/cm	----	----	----	----	56.1	----
pH	----	E108/VA	0.10	pH units	----	----	----	----	7.35	----
Turbidity	----	E121/VA	0.10	NTU	----	----	----	----	<0.10	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	2.25	1.14	1.19	----	----	----
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L	2.63	1.53	1.32	----	----	----
Microbiological Tests										
Heterotrophic plate count [HPC]	----	E020/VA	1	CFU/mL	----	----	----	----	<1	----
Coliforms, Escherichia coli [E. coli]	----	E010/VA	1	MPN/100 mL	----	----	----	----	<1	----
Coliforms, total	----	E010/VA	1	MPN/100 mL	----	----	----	----	<1	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

Quality Control Interpretive Report

Work Order : VA26C2761

Client : Town of Ladysmith
Contact : Shawn Baker
Address : 410 Esplanade PO Box 220
Ladysmith BC Canada V9G 1A2
Telephone : ----
Project : Arbutus Water Treatment - Weekly Sampling
PO : 10940
C-O-C number : ----
Sampler : ----
Site : Town of Ladysmith
Quote number : Town of Ladysmith Standing Offer
No. of samples received : 4
No. of samples analysed : 4

Laboratory : ALS Environmental - Vancouver
Account Manager : Kevin Bhikadia
Address : 8081 Lougheed Highway
Burnaby British Columbia Canada V5A 1W9
Telephone : +1 604 253 4188
Date Samples Received : 19-Aug-2026 11:00
Issue Date : 26-Aug-2026 15:34

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Summary of Outliers

Outliers : Quality Control Samples

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- No Laboratory Control Sample Duplicate (LCSD) outliers occur
- No Matrix Spike outliers occur.
- No Matrix Spike Duplicate (MSD) 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.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

CERTIFICATE OF ANALYSIS

Work Order	: VA26C3687		
Client	: Town of Ladysmith	Laboratory	: ALS Environmental - Vancouver
Contact	: Shawn Baker	Account Manager	: Kevin Bhikadia
Address	: 410 Esplanade PO Box 220 Ladysmith British Columbia Canada V9G 1A2	Address	: 8081 Lougheed Highway Burnaby BC Canada V5A 1W9
Telephone	: ----	E-mail	: Kevin.Bhikadia@alsglobal.com
Project	: ----	Telephone	: +1 604 253 4188
PO	: 10977	Date Samples Received	: 26-Aug-2026 11:18
C-O-C number	: ----	Date Analysis Commenced	: 26-Aug-2026
Sampler	: ----	Issue Date	: 31-Aug-2026 10:24
Site	: Town of Ladysmith		
Quote number	: Town of Ladysmith Standing Offer		
No. of samples received	: 4		
No. of samples analysed	: 4		

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<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Kim Jensen	Department Manager - Metals	Inorganics, Burnaby, British Columbia
Miles Gropen	Department Manager - Inorganics	Microbiology, Burnaby, British Columbia



General Comments

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Unit	Description
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CFU/mL	colony forming units per millilitre
CU	colour units (1 cu = 1 mg/l pt)
mg/L	milligrams per litre
MPN/100mL	most probable number per hundred millilitres
NTU	nephelometric turbidity units
pH units	pH units
µS/cm	microsiemens per centimetre

<: 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.

Workorder Comments

Sample name" Treated Water (post reservoir)" Exceeded Recommended Holding Time prior to receipt at the lab for Microbiology analysis. Please check the PM for any other concerns,





Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	Raw Water ----	DAF Effluent ----	UF Effluent ----	Treated Water (post reservoir) ----	----
Client sampling date / time						25-Aug-2026 10:30	25-Aug-2026 10:30	25-Aug-2026 10:30	25-Aug-2026 10:30	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA26C3687-001	VA26C3687-002	VA26C3687-003	VA26C3687-004	----
						Result	Result	Result	Result	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/VA	-	-	lab	lab	lab	lab	----	----
Physical Tests										
Alkalinity, total (as CaCO3)	----	E290/VA	1.0	mg/L	----	----	----	----	13.5	----
Colour, true	----	E329/VA	5.0	CU	----	----	----	----	<5.0	----
Conductivity	----	E100/VA	2.0	µS/cm	----	----	----	----	57.1	----
pH	----	E108/VA	0.10	pH units	----	----	----	----	7.40	----
Turbidity	----	E121/VA	0.10	NTU	----	----	----	----	<0.10	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	2.24	1.05	0.92	----	----	----
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L	2.36	1.65	1.20	----	----	----
Microbiological Tests										
Heterotrophic plate count [HPC]	----	E020/VA	1	CFU/mL	----	----	----	----	<1	----
Coliforms, Escherichia coli [E. coli]	----	E010/VA	1	MPN/100 mL	----	----	----	----	<1	----
Coliforms, total	----	E010/VA	1	MPN/100 mL	----	----	----	----	<1	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

Quality Control Interpretive Report

Work Order : VA26C3687

Client : Town of Ladysmith
Contact : Shawn Baker
Address : 410 Esplanade PO Box 220
Ladysmith BC Canada V9G 1A2
Telephone : ----
Project : ----
PO : 10977
C-O-C number : ----
Sampler : ----
Site : Town of Ladysmith
Quote number : Town of Ladysmith Standing Offer
No. of samples received : 4
No. of samples analysed : 4

Laboratory : ALS Environmental - Vancouver
Account Manager : Kevin Bhikadia
Address : 8081 Lougheed Highway
Burnaby British Columbia Canada V5A 1W9
Telephone : +1 604 253 4188
Date Samples Received : 26-Aug-2026 11:18
Issue Date : 31-Aug-2026 10:24

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RPD: Relative Percent Difference.

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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 Laboratory Control Sample Duplicate (LCSD) outliers occur
- No Matrix Spike outliers occur.
- No Matrix Spike Duplicate (MSD) 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.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.