



Valleyview

Your C.O.C. #: WI023232, WI023232

well 1

BV Labs - Partial/Rush Results

Attention: CB WATERWORKS

Cowichan Bay Waterworks
1760 Pavenham Rd
Cowichan Bay, BC
Canada V0R 1N1

Report Date: 2020/07/28

Report #: R2908446

Version: 2 - Partial

CERTIFICATE OF ANALYSIS – PARTIAL RESULTS

BV LABS JOB #: C050475

Received: 2020/07/20, 14:05

Sample Matrix: Drinking Water
Samples Received: 1

Analyses	Date		Laboratory Method	Analytical Method
	Quantity	Extracted		
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	1	N/A	2020/07/22 BBY6SOP-00026	SM 23 2320 B m
Chloride/Sulphate by Auto Colourimetry (1)	1	N/A	2020/07/21 BBY6SOP-00011 / BBY6SOP-00017	SM23-4500-Cl/SO4-E m
Colour (True) by Kone Lab (1)	1	N/A	2020/07/21 BBY6SOP-00057	SM 23 2120 C m
Conductivity @25C (1)	1	N/A	2020/07/22 BBY6SOP-00026	SM 23 2510 B m
Fluoride (1)	1	N/A	2020/07/24 BBY6SOP-00048	SM 23 4500-F C m
Sulphide (as H2S)	1	N/A	2020/07/24	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	1	N/A	2020/07/23 BBY WI-00033	Auto Calc
Mercury (Total) by CV (1)	1	2020/07/22	2020/07/22 AB SOP-00084	BCMOE BCLM Oct2013 m
Heterotropic Plate Count (MF) in Water (1)	1	N/A	2020/07/21 BBY4SOP-00003	SM 23 9215
Na, K, Ca, Mg, S by CRC ICPMS (total) (1)	1	N/A	2020/07/23 BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total) (1)	1	N/A	2020/07/22 BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrogen (Total) (1)	1	N/A	2020/07/24 BBY6SOP-00016	SM 23 4500-N C m
Ammonia-N (Total)	1	N/A	2020/07/24 AB SOP-00007	SM 23 4500 NH3 A G m
Nitrate + Nitrite (N) (1)	1	N/A	2020/07/22 BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrite (N) by CFA (1)	1	N/A	2020/07/22 BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrogen - Nitrate (as N) (1)	1	N/A	2020/07/22 BBY WI-00033	Auto Calc
Nitrogen (Tot. Organic) Calculation (1)	1	N/A	2020/07/24 BBY WI-00033	Auto Calc
pH @25°C (1, 3)	1	N/A	2020/07/22 BBY6SOP-00026	SM 23 4500-H+ B m
Sat. pH and Langelier Index (@ 4.4C) (1)	1	N/A	2020/07/23 BBY WI-00033	Auto Calc
Sat. pH and Langelier Index (@ 60C) (1)	1	N/A	2020/07/23 BBY WI-00033	Auto Calc
Total Sulphide	1	N/A	2020/07/24 AB SOP-00080	SM 23 4500 S2-A D Fm
Total Dissolved Solids (Filt. Residue) (1)	1	2020/07/23	2020/07/24 BBY6SOP-00033	SM 23 2540 C m
Total Coliform & E.Coli by MF-Chromocult (1)	1	N/A	2020/07/21 BBY4SOP-00143	Merck KGaA Version 1
Carbon (Total Organic) (4)	1	N/A	2020/07/26 AB SOP-00087	MMCW 119 1996 m
Turbidity (1)	1	N/A	2020/07/21 BBY6SOP-00027	SM 23 2130 B m
UV absorbance @254nm-Unfiltered	1	N/A	2020/07/23 CAL SOP-00274	SM 23 5910B m
UV transmittance @254nm-Unfiltered	1	N/A	2020/07/23	Auto-Calc

Remarks:

Bureau Veritas Laboratories are accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used



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BV Labs Partial Results

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CERTIFICATE OF ANALYSIS – PARTIAL RESULTS

BV LABS JOB #: C050475

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by BV Labs are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in BV Labs profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and BV Labs in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

BV Labs liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. BV Labs has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by BV Labs, unless otherwise agreed in writing. BV Labs is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by BV Labs, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) This test was performed by BV Labs Vancouver
- (2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (3) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas Laboratories endeavours to analyze samples as soon as possible after receipt.
- (4) TOC present in the sample should be considered as non-purgeable TOC.

Encryption Key



**AUTHORIZED REPORT
RAPPORT AUTORISÉ**

Bureau Veritas Laboratories
28 Jul 2020 14:02:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Customer Solutions, Western Canada Customer Experience Team

Email: customersolutionswest@bvlabs.com

Phone# (403) 291-3077

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BUREAU VERITAS

BV Labs Job #: C050475
Report Date: 2020/07/28

Cowichan Bay Waterworks
Sampler Initials: JW

VIHA PKG, WELLS/SPRINGS - BURNABY (DRINKING WATER)

BV Labs - Partial/Rush Results

BV Labs ID					YC6986		
Sampling Date					2020/07/20 09:15		
COC Number					WI023232		
	UNITS	MAC	AO	OG	VALLEYVIEW WELL #1 RAW	RDL	QC Batch
ANIONS							
Nitrite (N)	mg/L	1	-	-	<0.0050	0.0050	9931654
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	-	-	-	86.9	0.50	9928639
Nitrate (N)	mg/L	10	-	-	0.336	0.020	9929144
Total Organic Nitrogen (N)	mg/L	-	-	-	<0.020	0.020	9929439
Sulphide (as H2S)	mg/L	-	0.05	-	<0.0020	0.0020	9929450
Transmittance at 254nm	%T/cm	-	-	-	>97.7	N/A	9929454
Misc. Inorganics							
Conductivity	uS/cm	-	-	-	200	2.0	9931293
pH	pH	-	-	7.0:10.5	7.94	N/A	9931291
Total Organic Carbon (C)	mg/L	-	-	-	<0.50	0.50	9935700
Total Dissolved Solids	mg/L	-	-	-	130	10	9932375
Anions							
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	1.0	9931292
Alkalinity (Total as CaCO3)	mg/L	-	-	-	84	1.0	9931292
Bicarbonate (HCO3)	mg/L	-	-	-	100	1.0	9931292
Carbonate (CO3)	mg/L	-	-	-	<1.0	1.0	9931292
Dissolved Fluoride (F)	mg/L	1.5	-	-	0.052	0.050	9934007
Hydroxide (OH)	mg/L	-	-	-	<1.0	1.0	9931292
Total Sulphide	mg/L	-	0.05	-	<0.0018	0.0018	9934727
Dissolved Chloride (Cl)	mg/L	-	250	-	9.8	1.0	9929739
Dissolved Sulphate (SO4)	mg/L	-	500	-	5.2	1.0	9929739
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	<5.0	5.0	9929954
UV absorbance (254nm)	AU/cm	-	-	-	<0.010	0.010	9932284
Nutrients							
Total Ammonia (N)	mg/L	-	-	-	<0.015	0.015	9933378
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.336	0.020	9931653
Total Nitrogen (N)	mg/L	-	-	-	0.341	0.020	9933761
Physical Properties							
Turbidity	NTU	see remark	see remark	see remark	<0.10	0.10	9930120
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit N/A = Not Applicable							



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VERITAS

BV Labs Job #: C050475
Report Date: 2020/07/28

Cowichan Bay Waterworks
Sampler Initials: JW

VIHA PKG, WELLS/SPRINGS - BURNABY (DRINKING WATER)

BV Labs ID					YC6986		
Sampling Date					2020/07/20 09:15		
COC Number					WI023232		
	UNITS	MAC	AO	OG	VALLEYVIEW WELL #1 RAW	RDL	QC Batch

Elements							
Total Mercury (Hg)	ug/L	1	-	-	<0.0019	0.0019	9930940
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	-	-	100	<3.0	3.0	9930844
Total Antimony (Sb)	ug/L	6	-	-	<0.50	0.50	9930844
Total Arsenic (As)	ug/L	10	-	-	1.58	0.10	9930844
Total Barium (Ba)	ug/L	1000	-	-	3.6	1.0	9930844
Total Beryllium (Be)	ug/L	-	-	-	<0.10	0.10	9930844
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	1.0	9930844
Total Boron (B)	ug/L	5000	-	-	<50	50	9930844
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	0.010	9930844
Total Chromium (Cr)	ug/L	50	-	-	2.2	1.0	9930844
Total Cobalt (Co)	ug/L	-	-	-	<0.20	0.20	9930844
Total Copper (Cu)	ug/L	2000	1000	-	0.46	0.20	9930844
Total Iron (Fe)	ug/L	-	300	-	<5.0	5.0	9930844
Total Lead (Pb)	ug/L	5	-	-	<0.20	0.20	9930844
Total Manganese (Mn)	ug/L	120	20	-	<1.0	1.0	9930844
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	1.0	9930844
Total Nickel (Ni)	ug/L	-	-	-	<1.0	1.0	9930844
Total Selenium (Se)	ug/L	50	-	-	0.19	0.10	9930844
Total Silicon (Si)	ug/L	-	-	-	10500	100	9930844
Total Silver (Ag)	ug/L	-	-	-	<0.020	0.020	9930844
Total Strontium (Sr)	ug/L	7000	-	-	63.0	1.0	9930844
Total Thallium (Tl)	ug/L	-	-	-	<0.010	0.010	9930844
Total Tin (Sn)	ug/L	-	-	-	<5.0	5.0	9930844
Total Titanium (Ti)	ug/L	-	-	-	<5.0	5.0	9930844
Total Uranium (U)	ug/L	20	-	-	0.21	0.10	9930844
Total Vanadium (V)	ug/L	-	-	-	6.4	5.0	9930844
Total Zinc (Zn)	ug/L	-	5000	-	<5.0	5.0	9930844
Total Zirconium (Zr)	ug/L	-	-	-	<0.10	0.10	9930844
Total Calcium (Ca)	mg/L	-	-	-	19.3	0.050	9929143
Total Magnesium (Mg)	mg/L	-	-	-	9.41	0.050	9929143
Total Potassium (K)	mg/L	-	-	-	0.714	0.050	9929143

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	

BV Labs - Partial/Rush Results



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VIHA PKG, WELLS/SPRINGS - BURNABY (DRINKING WATER)

BV Labs ID					YC6986		
Sampling Date					2020/07/20 09:15		
COC Number					WI023232		
	UNITS	MAC	AO	OG	VALLEYVIEW WELL #1 RAW	RDL	QC Batch
Total Sodium (Na)	mg/L	-	200	-	5.41	0.050	9929143
Total Sulphur (S)	mg/L	-	-	-	<3.0	3.0	9929143
Microbiological Param.							
Heterotrophic Plate Count	CFU/mL	-	-	-	3	1	9929692
Total Coliforms	CFU/100mL	0	-	-	0	N/A	9929691
E. coli	CFU/100mL	0	-	-	0	N/A	9929691
Calculated Parameters							
Langelier Index (@ 4.4C)	N/A	-	-	-	-0.761	N/A	9929444
Langelier Index (@ 60C)	N/A	-	-	-	0.279	N/A	9929448
Saturation pH (@ 4.4C)	N/A	-	-	-	8.70	N/A	9929444
Saturation pH (@ 60C)	N/A	-	-	-	7.66	N/A	9929448
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
N/A = Not Applicable							

BV Labs - Partial/Rush Results



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Cowichan Bay Waterworks
Sampler Initials: JW

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	14.7°C
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Sample YC6986 [VALLEYVIEW WELL #1 RAW] : Sample was analyzed past recommended hold time for Heterotropic Plate Count (MF) in Water. Sample was analyzed past recommended hold time for Iron Related Bacteria. Sample was analyzed past recommended hold time for Sulphate Reducing Bacteria.

MAC,AO,OG: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, June 2019.

Criteria A = Maximum Acceptable Concentration (MAC) / Criteria B = Aesthetic Objectives (AO) / Criteria C = Operational Guidance Values (OG)
It is recommended to consult these guidelines when interpreting your data since there are non-numerical guidelines that are not included on this report.

Turbidity Guidelines:

1. Chemically assisted filtration: less than or equal to 0.3 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 1.0 NTU at any time.
2. Slow sand / diatomaceous earth filtration: less than or equal to 1.0 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 3.0 NTU at any time.
3. Membrane filtration: less than or equal to 0.1 NTU in 99% of the measurements made or at least 99% of the time each calendar month. Shall not exceed 0.3 NTU at any time.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.

Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

BV Labs - Partial/Rush Results



BV Labs Job #: C050475
Report Date: 2020/07/28

QUALITY ASSURANCE REPORT

Cowichan Bay Waterworks
Sampler Initials: JW

BV LABS - P E T I T A / P L U M B U M

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9929739	Dissolved Chloride (Cl)	2020/07/21	104	80 - 120	103	80 - 120	<1.0	mg/L	1.3	20
9929739	Dissolved Sulphate (SO4)	2020/07/21	NC	80 - 120	94	80 - 120	<1.0	mg/L	1.4	20
9929954	True Colour	2020/07/21			97	80 - 120	<5.0	Col. Unit	NC	20
9930120	Turbidity	2020/07/21			101	80 - 120	<0.10	NTU	2.7	20
9930844	Total Aluminum (Al)	2020/07/22	98	80 - 120	101	80 - 120	<3.0	ug/L	2.4	20
9930844	Total Antimony (Sb)	2020/07/22	104	80 - 120	102	80 - 120	<0.50	ug/L	NC	20
9930844	Total Arsenic (As)	2020/07/22	103	80 - 120	102	80 - 120	<0.10	ug/L	NC	20
9930844	Total Barium (Ba)	2020/07/22	102	80 - 120	102	80 - 120	<1.0	ug/L	1.0	20
9930844	Total Beryllium (Be)	2020/07/22	98	80 - 120	100	80 - 120	<0.10	ug/L		
9930844	Total Bismuth (Bi)	2020/07/22	87	80 - 120	92	80 - 120	<1.0	ug/L		
9930844	Total Boron (B)	2020/07/22	97	80 - 120	99	80 - 120	<50	ug/L	NC	20
9930844	Total Cadmium (Cd)	2020/07/22	102	80 - 120	100	80 - 120	<0.010	ug/L	NC	20
9930844	Total Chromium (Cr)	2020/07/22	99	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
9930844	Total Cobalt (Co)	2020/07/22	99	80 - 120	101	80 - 120	<0.20	ug/L	NC	20
9930844	Total Copper (Cu)	2020/07/22	96	80 - 120	100	80 - 120	<0.20	ug/L	0.35	20
9930844	Total Iron (Fe)	2020/07/22	101	80 - 120	104	80 - 120	<5.0	ug/L	2.2	20
9930844	Total Lead (Pb)	2020/07/22	100	80 - 120	101	80 - 120	<0.20	ug/L		
9930844	Total Manganese (Mn)	2020/07/22	99	80 - 120	102	80 - 120	<1.0	ug/L	8.0	20
9930844	Total Molybdenum (Mo)	2020/07/22	103	80 - 120	104	80 - 120	<1.0	ug/L	NC	20
9930844	Total Nickel (Ni)	2020/07/22	99	80 - 120	100	80 - 120	<1.0	ug/L	NC	20
9930844	Total Selenium (Se)	2020/07/22	103	80 - 120	102	80 - 120	<0.10	ug/L	NC	20
9930844	Total Silicon (Si)	2020/07/22	109	80 - 120	111	80 - 120	<100	ug/L	0.51	20
9930844	Total Silver (Ag)	2020/07/22	98	80 - 120	99	80 - 120	<0.020	ug/L	NC	20
9930844	Total Strontium (Sr)	2020/07/22	105	80 - 120	105	80 - 120	<1.0	ug/L	0.78	20
9930844	Total Thallium (Tl)	2020/07/22	101	80 - 120	102	80 - 120	<0.010	ug/L		
9930844	Total Tin (Sn)	2020/07/22	101	80 - 120	102	80 - 120	<5.0	ug/L		
9930844	Total Titanium (Ti)	2020/07/22	101	80 - 120	105	80 - 120	<5.0	ug/L		
9930844	Total Uranium (U)	2020/07/22	103	80 - 120	103	80 - 120	<0.10	ug/L	NC	20
9930844	Total Vanadium (V)	2020/07/22	100	80 - 120	102	80 - 120	<5.0	ug/L	NC	20
9930844	Total Zinc (Zn)	2020/07/22	99	80 - 120	99	80 - 120	<5.0	ug/L	NC	20
9930844	Total Zirconium (Zr)	2020/07/22	103	80 - 120	104	80 - 120	<0.10	ug/L		
9930940	Total Mercury (Hg)	2020/07/22	93	80 - 120	99	80 - 120	<0.0019	ug/L	NC	20
9931291	pH	2020/07/22			102	97 - 103				



BV Labs Job #: C050475
Report Date: 2020/07/28

QUALITY ASSURANCE REPORT (CONT'D)

Cowichan Bay Waterworks
Sampler Initials: JW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9931292	Alkalinity (PP as CaCO3)	2020/07/22					<1.0	mg/L	NC	20
9931292	Alkalinity (Total as CaCO3)	2020/07/22	NC	80 - 120	99	80 - 120	<1.0	mg/L	0.58	20
9931292	Bicarbonate (HCO3)	2020/07/22					<1.0	mg/L	0.58	20
9931292	Carbonate (CO3)	2020/07/22					<1.0	mg/L	NC	20
9931292	Hydroxide (OH)	2020/07/22					<1.0	mg/L	NC	20
9931293	Conductivity	2020/07/22			99	80 - 120	<2.0	uS/cm	0.23	10
9931653	Nitrate plus Nitrite (N)	2020/07/22	105	80 - 120	109	80 - 120	<0.020	mg/L	NC	25
9931654	Nitrite (N)	2020/07/22	101	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
9932284	UV absorbance (254nm)	2020/07/23			96	N/A	<0.010	AU/cm	NC	20
9932375	Total Dissolved Solids	2020/07/24	103	80 - 120	92	80 - 120	<10	mg/L	3.7	20
9933378	Total Ammonia (N)	2020/07/24	NC	80 - 120	108	80 - 120	<0.015	mg/L	0.010 (1)	20
9933761	Total Nitrogen (N)	2020/07/24	102	80 - 120	97	80 - 120	<0.020	mg/L	1.7	20
9934007	Dissolved Fluoride (F)	2020/07/24	100	80 - 120	102	80 - 120	<0.050	mg/L	0	20
9934727	Total Sulphide	2020/07/24	103	80 - 120	106	80 - 120	<0.0018	mg/L	6.9	20
9935700	Total Organic Carbon (C)	2020/07/26	106	80 - 120	100	80 - 120	<0.50	mg/L	NC	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Detection limits raised due to dilution to bring analyte within the calibrated range.



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BV Labs Job #: C050475
Report Date: 2020/07/28

Cowichan Bay Waterworks
Sampler Initials: JW

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Harry (Peng) Liang, Senior Analyst

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

BV Labs - Partial/Rush Results



Victoria Unit 1, 851 Westfield Rd, Victoria, BC V3A 4V2 Ph: (250) 386-8112 Toll Free: (833) 282-6227
 Courtenay: 2785 B Maray Ave, Courtenay, BC V9N 6M9 Ph: (250) 338-7786 Toll Free: (833) 282-6227

WI023232



BV Job #: COS0475_COC

Company (Invoicing): COWICHAN Bay Water Dist
 Company (Reporting): JFC WATER SOLUTIONS LTD
 Contact Name: JOE WOOLLS
 Mailing Address:

VANCOUVER ISLAND HEALTH
 AUTHORITY
 Medical Health Officer: 1.800.204.6186
 Drinking Water Officer: 250.756.8215

All information on this form must be completed before sampling.
 If your drinking water source services two or more homes, we strongly recommend that you contact local health authorities to find out how the Drinking Water Protection Act applies to this system. Please be aware that, in this situation, we are legally obligated to report results directly to local health authorities.

Phone #: _____
 E-mail: JOE.P@JFC.WATER.CA Payment Received: Yes No

After Hours Contact #:
 Regular Turnaround Time (TAT) (5 days for most tests) RUSH Please contact the lab. Surcharges will be applied.

Project Name: _____ Date Required: _____

SPECIAL INSTRUCTIONS:
 Returns Cooler Ship Sample Bottles (please specify)

PLEASE CIRCLE		ANALYSIS REQUESTED PLEASE SELECT BELOW	
Sample from a Drinking Water Source? Y/N	Does source supply multiple households? Y/N	Drinking Water Born	Report Current Drinking Water Choice
Are you on a bottled water delivery? Y/N	Are you on a well water delivery? Y/N	Home Safety Scan	
		Total Metals Screen including Microbes & Hg	
		Taste, Odour and E. Coli	

- Sample Collection**
 For determining drinking water quality, samples should be representative of the water that will be consumed; therefore, we suggest sampling at the kitchen tap. However, other sampling locations may be used to determine pre-treatment water quality or for troubleshooting purposes.
1. Remove aerator/screen from faucet.
 2. Let the water run for 5 minutes.
 3. Label the bottle with your name, date and time you are taking the sample.
 4. Fill all bottle(s) provided. Take care not to touch the inside of the bottle or underside of cap.
 5. Cap the sample and place it in fridge or small cooler with icepack.

Remember: It is important that you do not contaminate the sample as you handle the container. Wash your hands before you start and be careful not to touch the rim of the bottle or the inside of the cap.

Bureau Veritas
RECEIVED IN VICTORIA
Robert D. Nordbragt
JUL 20 2020 @ 14:05
 By: _____
 Temps: 14.15 1.15
 on ice

- DON'T:**
 Don't rinse or boil any bottle you receive from the lab.
 Don't let the sample sit out overnight, please refrigerate.
 Don't freeze the sample.

- Sample Transportation & Delivery**
1. Samples should arrive at the laboratories (Courtenay or Victoria) within 24 hrs of sampling. Ship samples between Monday and Thursday to avoid lab scheduling conflicts.
 2. The sample should be kept cool during transit (<4°C - refrigerated or packed on ice).
 3. Fill out the Chain of Custody (COC) form, include these instructions and submit with the sample. Incomplete or missing COCs will result in delays impacting turnaround time and the lab's ability to proceed with time sensitive tests.
 4. **Delivery Options:**
 Personally deliver samples to Courtenay or Victoria (Samples will be forwarded to Burnaby on your behalf unless analysis is completed locally in Courtenay. Please consider sample hold times.)
 Overnight shipping to Burnaby: If you ship a sample on the same day that it was collected you can use an overnight courier.
 Same day shipping: Available in some areas. Please contact the lab for details.

Unless otherwise specified to in writing, work submitted on this Chain of Custody to Bureau Veritas Laboratories, standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgement and acceptance of our terms available at www.bv.com/terms-and-conditions

Chain of Custody	Date (yy/mm/dd)	Time (24 hr)	Signature	Date (yy/mm/dd)	Time (24 hr)	Signature	Temperature on Receipt (°C)	Container	Seal	Notes
Released By:	JULY 20/20	2:00 PM	J. WOOLLS	JULY 20/20	0:00					

COC-1035

SEE ACTR



Valleyview

Your C.O.C. #: wi023232, WI023232

BV Labs - Partial/Full Results

Attention: CB WATERWORKS

Cowichan Bay Waterworks
1760 Pavenham Rd
Cowichan Bay, BC
Canada V0R 1N1

Report Date: 2020/07/28

Report #: R2908448

Version: 3 - Partial

CERTIFICATE OF ANALYSIS – PARTIAL RESULTS

BV LABS JOB #: C050475

Received: 2020/07/20, 14:05

Sample Matrix: Drinking Water
Samples Received: 1

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	1	N/A	2020/07/22	BBY6SOP-00026	SM 23 2320 B m
Chloride/Sulphate by Auto Colourimetry (1)	1	N/A	2020/07/21	BBY6SOP-00011 / BBY6SOP-00017	SM23-4500-Cl/SO4-E m
Colour (True) by Kone Lab (1)	1	N/A	2020/07/21	BBY6SOP-00057	SM 23 2120 C m
Conductivity @25C (1)	1	N/A	2020/07/22	BBY6SOP-00026	SM 23 2510 B m
Fluoride (1)	1	N/A	2020/07/24	BBY6SOP-00048	SM 23 4500-F C m
Sulphide (as H2S)	1	N/A	2020/07/24		Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	1	N/A	2020/07/23	BBY WI-00033	Auto Calc
Mercury (Total) by CV (1)	1	2020/07/22	2020/07/22	AB SOP-00084	BCMEOE BCLM Oct2013 m
Heterotropic Plate Count (MF) in Water (1)	1	N/A	2020/07/21	BBY4SOP-00003	SM 23 9215
Na, K, Ca, Mg, S by CRC ICPMS (total) (1)	1	N/A	2020/07/23	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total) (1)	1	N/A	2020/07/22	BBY7SOP-00003 / BBY7SOP-00002	EPA 6020b R2 m
Nitrogen (Total) (1)	1	N/A	2020/07/24	BBY6SOP-00016	SM 23 4500-N C m
Ammonia-N (Total)	1	N/A	2020/07/24	AB SOP-00007	SM 23 4500 NH3 A G m
Nitrate + Nitrite (N) (1)	1	N/A	2020/07/22	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrite (N) by CFA (1)	1	N/A	2020/07/22	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrogen - Nitrate (as N) (1)	1	N/A	2020/07/22	BBY WI-00033	Auto Calc
Nitrogen (Tot. Organic) Calculation (1)	1	N/A	2020/07/24	BBY WI-00033	Auto Calc
pH @25°C (1, 3)	1	N/A	2020/07/22	BBY6SOP-00026	SM 23 4500-H+ B m
Sat. pH and Langelier Index (@ 4.4C) (1)	1	N/A	2020/07/23	BBY WI-00033	Auto Calc
Sat. pH and Langelier Index (@ 60C) (1)	1	N/A	2020/07/23	BBY WI-00033	Auto Calc
Total Sulphide	1	N/A	2020/07/24	AB SOP-00080	SM 23 4500 S2-A D Fm
Total Dissolved Solids (Filt. Residue) (1)	1	2020/07/23	2020/07/24	BBY6SOP-00033	SM 23 2540 C m
Total Coliform & E.Coli by MF-Chromocult (1)	1	N/A	2020/07/21	BBY4SOP-00143	Merck KGaA Version 1
Carbon (Total Organic) (4)	1	N/A	2020/07/25	AB SOP-00087	MMCW 119 1996 m
Turbidity (1)	1	N/A	2020/07/21	BBY6SOP-00027	SM 23 2130 B m
UV absorbance @254nm-Unfiltered	1	N/A	2020/07/23	CAL SOP-00274	SM 23 5910B m
UV transmittance @254nm-Unfiltered	1	N/A	2020/07/23		Auto-Calc

Remarks:

Bureau Veritas Laboratories are accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used



Your C.O.C. #: wi023232, WI023232

BV Labs - Partial/Brush Results

Attention: CB WATERWORKS

Cowichan Bay Waterworks
1760 Pavenham Rd
Cowichan Bay, BC
Canada V0R 1N1

Report Date: 2020/07/28
Report #: R2908448
Version: 3 - Partial

CERTIFICATE OF ANALYSIS – PARTIAL RESULTS

BV LABS JOB #: C050475

Received: 2020/07/20, 14:05

by BV Labs are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in BV Labs profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and BV Labs in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

BV Labs liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. BV Labs has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by BV Labs, unless otherwise agreed in writing. BV Labs is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by BV Labs, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) This test was performed by BV Labs Vancouver
- (2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
- (3) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas Laboratories endeavours to analyze samples as soon as possible after receipt.
- (4) TOC present in the sample should be considered as non-purgeable TOC.

Encryption Key



AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas Laboratories

28 Jul 2020 14:06:23

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Customer Solutions, Western Canada Customer Experience Team

Email: customersolutionswest@bvlabs.com

Phone# (403) 291-3077

=====
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



BUREAU
VERITAS

BV Labs Job #: C050475
Report Date: 2020/07/28

Cowichan Bay Waterworks
Sampler Initials: JW

VIHA PKG, WELLS/SPRINGS - BURNABY (DRINKING WATER)

BV Labs ID					YC6987		
Sampling Date					2020/07/20 09:45		
COC Number					WI023232		
	UNITS	MAC	AO	OG	VALLEYVIEW WELL #2 RAW	RDL	QC Batch
ANIONS							
Nitrite (N)	mg/L	1	-	-	<0.0050	0.0050	9931651
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	-	-	-	63.7	0.50	9928639
Nitrate (N)	mg/L	10	-	-	0.179	0.020	9929144
Total Organic Nitrogen (N)	mg/L	-	-	-	0.038	0.020	9929439
Sulphide (as H2S)	mg/L	-	0.05	-	<0.0020	0.0020	9929450
Transmittance at 254nm	%T/cm	-	-	-	>97.7	N/A	9929454
Misc. Inorganics							
Conductivity	uS/cm	-	-	-	170	2.0	9931277
pH	pH	-	-	7.0:10.5	7.64	N/A	9931276
Total Organic Carbon (C)	mg/L	-	-	-	<0.50	0.50	9935380
Total Dissolved Solids	mg/L	-	-	-	98	10	9932375
Anions							
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1.0	1.0	9931275
Alkalinity (Total as CaCO3)	mg/L	-	-	-	69	1.0	9931275
Bicarbonate (HCO3)	mg/L	-	-	-	84	1.0	9931275
Carbonate (CO3)	mg/L	-	-	-	<1.0	1.0	9931275
Dissolved Fluoride (F)	mg/L	1.5	-	-	0.061	0.050	9934007
Hydroxide (OH)	mg/L	-	-	-	<1.0	1.0	9931275
Total Sulphide	mg/L	-	0.05	-	<0.0018	0.0018	9934727
Dissolved Chloride (Cl)	mg/L	-	250	-	7.0	1.0	9929739
Dissolved Sulphate (SO4)	mg/L	-	500	-	4.9	1.0	9929739
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	<5.0	5.0	9929954
UV absorbance (254nm)	AU/cm	-	-	-	<0.010	0.010	9932284
Nutrients							
Total Ammonia (N)	mg/L	-	-	-	0.068	0.015	9933378
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.179	0.020	9931650
Total Nitrogen (N)	mg/L	-	-	-	0.284	0.020	9933761
Physical Properties							
Turbidity	NTU	see remark	see remark	see remark	<0.10	0.10	9930120
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
N/A = Not Applicable							

BV Labs - Partial/Rush Results



BUREAU
VERITAS

BV Labs Job #: C050475
Report Date: 2020/07/28

Cowichan Bay Waterworks
Sampler Initials: JW

VIHA PKG, WELLS/SPRINGS - BURNABY (DRINKING WATER)

BV Labs ID					YC6987		
Sampling Date					2020/07/20 09:45		
COC Number					WI023232		
	UNITS	MAC	AO	OG	VALLEYVIEW WELL #2 RAW	RDL	QC Batch

Elements							
Total Mercury (Hg)	ug/L	1	-	-	0.0240	0.0019	9930940
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	-	-	100	<3.0	3.0	9930844
Total Antimony (Sb)	ug/L	6	-	-	<0.50	0.50	9930844
Total Arsenic (As)	ug/L	10	-	-	1.85	0.10	9930844
Total Barium (Ba)	ug/L	1000	-	-	2.8	1.0	9930844
Total Beryllium (Be)	ug/L	-	-	-	<0.10	0.10	9930844
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	1.0	9930844
Total Boron (B)	ug/L	5000	-	-	<50	50	9930844
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	0.010	9930844
Total Chromium (Cr)	ug/L	50	-	-	2.3	1.0	9930844
Total Cobalt (Co)	ug/L	-	-	-	<0.20	0.20	9930844
Total Copper (Cu)	ug/L	2000	1000	-	0.23	0.20	9930844
Total Iron (Fe)	ug/L	-	300	-	<5.0	5.0	9930844
Total Lead (Pb)	ug/L	5	-	-	0.41	0.20	9930844
Total Manganese (Mn)	ug/L	120	20	-	3.7	1.0	9930844
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	1.0	9930844
Total Nickel (Ni)	ug/L	-	-	-	<1.0	1.0	9930844
Total Selenium (Se)	ug/L	50	-	-	0.35	0.10	9930844
Total Silicon (Si)	ug/L	-	-	-	9480	100	9930844
Total Silver (Ag)	ug/L	-	-	-	<0.020	0.020	9930844
Total Strontium (Sr)	ug/L	7000	-	-	49.6	1.0	9930844
Total Thallium (Tl)	ug/L	-	-	-	<0.010	0.010	9930844
Total Tin (Sn)	ug/L	-	-	-	<5.0	5.0	9930844
Total Titanium (Ti)	ug/L	-	-	-	<5.0	5.0	9930844
Total Uranium (U)	ug/L	20	-	-	<0.10	0.10	9930844
Total Vanadium (V)	ug/L	-	-	-	7.0	5.0	9930844
Total Zinc (Zn)	ug/L	-	5000	-	<5.0	5.0	9930844
Total Zirconium (Zr)	ug/L	-	-	-	<0.10	0.10	9930844
Total Calcium (Ca)	mg/L	-	-	-	14.7	0.050	9929143
Total Magnesium (Mg)	mg/L	-	-	-	6.57	0.050	9929143
Total Potassium (K)	mg/L	-	-	-	0.637	0.050	9929143

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	

BV Labs - Partial/Rush Results



BUREAU
VERITAS

BV Labs Job #: C050475
Report Date: 2020/07/28

Cowichan Bay Waterworks
Sampler Initials: JW

VIHA PKG, WELLS/SPRINGS - BURNABY (DRINKING WATER)

BV Labs ID					YC6987		
Sampling Date					2020/07/20 09:45		
COC Number					WI023232		
	UNITS	MAC	AO	OG	VALLEYVIEW WELL #2 RAW	RDL	QC Batch
Total Sodium (Na)	mg/L	-	200	-	5.80	0.050	9929143
Total Sulphur (S)	mg/L	-	-	-	<3.0	3.0	9929143
Microbiological Param.							
Heterotrophic Plate Count	CFU/mL	-	-	-	3	1	9929692
Total Coliforms	CFU/100mL	0	-	-	0	N/A	9929691
E. coli	CFU/100mL	0	-	-	0	N/A	9929691
Calculated Parameters							
Langelier Index (@ 4.4C)	N/A	-	-	-	-1.26	N/A	9929444
Langelier Index (@ 60C)	N/A	-	-	-	-0.214	N/A	9929448
Saturation pH (@ 4.4C)	N/A	-	-	-	8.90	N/A	9929444
Saturation pH (@ 60C)	N/A	-	-	-	7.85	N/A	9929448
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
N/A = Not Applicable							

BV Labs - Partial/Rush Results



BUREAU
VERITAS

BV Labs Job #: C050475
Report Date: 2020/07/28

Cowichan Bay Waterworks
Sampler Initials: JW

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	14.7°C
-----------	--------

Sample YC6987 [VALLEYVIEW WELL #2 RAW] : Sample was analyzed past recommended hold time for Heterotropic Plate Count (MF) in Water. Sample was analyzed past recommended hold time for Iron Related Bacteria. Sample was analyzed past recommended hold time for Sulphate Reducing Bacteria.

MAC,AO,OG: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, June 2019.

Criteria A = Maximum Acceptable Concentration (MAC) / Criteria B = Aesthetic Objectives (AO) / Criteria C = Operational Guidance Values (OG)
It is recommended to consult these guidelines when interpreting your data since there are non-numerical guidelines that are not included on this report.

Turbidity Guidelines:

1. Chemically assisted filtration: less than or equal to 0.3 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 1.0 NTU at any time.
2. Slow sand / diatomaceous earth filtration: less than or equal to 1.0 NTU in 95% of the measurements or 95% of the time each month. Shall not exceed 3.0 NTU at any time.
3. Membrane filtration: less than or equal to 0.1 NTU in 99% of the measurements made or at least 99% of the time each calendar month. Shall not exceed 0.3 NTU at any time.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.

Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

BV Labs - Partial/Final Results



BV Labs Job #: C050475
Report Date: 2020/07/28

QUALITY ASSURANCE REPORT

Cowichan Bay Waterworks
Sampler Initials: JW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9929739	Dissolved Chloride (Cl)	2020/07/21	104	80 - 120	103	80 - 120	<1.0	mg/L	1.3	20
9929739	Dissolved Sulphate (SO4)	2020/07/21	NC	80 - 120	94	80 - 120	<1.0	mg/L	1.4	20
9929954	True Colour	2020/07/21			97	80 - 120	<5.0	Col. Unit	NC	20
9930120	Turbidity	2020/07/21			101	80 - 120	<0.10	NTU	2.7	20
9930844	Total Aluminum (Al)	2020/07/22	98	80 - 120	101	80 - 120	<3.0	ug/L	2.4	20
9930844	Total Antimony (Sb)	2020/07/22	104	80 - 120	102	80 - 120	<0.50	ug/L	NC	20
9930844	Total Arsenic (As)	2020/07/22	103	80 - 120	102	80 - 120	<0.10	ug/L	NC	20
9930844	Total Barium (Ba)	2020/07/22	102	80 - 120	102	80 - 120	<1.0	ug/L	1.0	20
9930844	Total Beryllium (Be)	2020/07/22	98	80 - 120	100	80 - 120	<0.10	ug/L		
9930844	Total Bismuth (Bi)	2020/07/22	87	80 - 120	92	80 - 120	<1.0	ug/L		
9930844	Total Boron (B)	2020/07/22	97	80 - 120	99	80 - 120	<50	ug/L	NC	20
9930844	Total Cadmium (Cd)	2020/07/22	102	80 - 120	100	80 - 120	<0.010	ug/L	NC	20
9930844	Total Chromium (Cr)	2020/07/22	99	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
9930844	Total Cobalt (Co)	2020/07/22	99	80 - 120	101	80 - 120	<0.20	ug/L	NC	20
9930844	Total Copper (Cu)	2020/07/22	96	80 - 120	100	80 - 120	<0.20	ug/L	0.35	20
9930844	Total Iron (Fe)	2020/07/22	101	80 - 120	104	80 - 120	<5.0	ug/L	2.2	20
9930844	Total Lead (Pb)	2020/07/22	100	80 - 120	101	80 - 120	<0.20	ug/L		
9930844	Total Manganese (Mn)	2020/07/22	99	80 - 120	102	80 - 120	<1.0	ug/L	8.0	20
9930844	Total Molybdenum (Mo)	2020/07/22	103	80 - 120	104	80 - 120	<1.0	ug/L	NC	20
9930844	Total Nickel (Ni)	2020/07/22	99	80 - 120	100	80 - 120	<1.0	ug/L	NC	20
9930844	Total Selenium (Se)	2020/07/22	103	80 - 120	102	80 - 120	<0.10	ug/L	NC	20
9930844	Total Silicon (Si)	2020/07/22	109	80 - 120	111	80 - 120	<100	ug/L	0.51	20
9930844	Total Silver (Ag)	2020/07/22	98	80 - 120	99	80 - 120	<0.020	ug/L	NC	20
9930844	Total Strontium (Sr)	2020/07/22	105	80 - 120	105	80 - 120	<1.0	ug/L	0.78	20
9930844	Total Thallium (Tl)	2020/07/22	101	80 - 120	102	80 - 120	<0.010	ug/L		
9930844	Total Tin (Sn)	2020/07/22	101	80 - 120	102	80 - 120	<5.0	ug/L		
9930844	Total Titanium (Ti)	2020/07/22	101	80 - 120	105	80 - 120	<5.0	ug/L		
9930844	Total Uranium (U)	2020/07/22	103	80 - 120	103	80 - 120	<0.10	ug/L	NC	20
9930844	Total Vanadium (V)	2020/07/22	100	80 - 120	102	80 - 120	<5.0	ug/L	NC	20
9930844	Total Zinc (Zn)	2020/07/22	99	80 - 120	99	80 - 120	<5.0	ug/L	NC	20
9930844	Total Zirconium (Zr)	2020/07/22	103	80 - 120	104	80 - 120	<0.10	ug/L		
9930940	Total Mercury (Hg)	2020/07/22	93	80 - 120	99	80 - 120	<0.0019	ug/L	NC	20
9931275	Alkalinity (PP as CaCO3)	2020/07/22					<1.0	mg/L	NC	20

BV LABS - P E T R O L E U M



BV Labs Job #: C050475
Report Date: 2020/07/28

QUALITY ASSURANCE REPORT(CONT'D)

Cowichan Bay Waterworks
Sampler Initials: JW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9931275	Alkalinity (Total as CaCO3)	2020/07/22	NC	80 - 120	98	80 - 120	<1.0	mg/L	0.30	20
9931275	Bicarbonate (HCO3)	2020/07/22					<1.0	mg/L	0.30	20
9931275	Carbonate (CO3)	2020/07/22					<1.0	mg/L	NC	20
9931275	Hydroxide (OH)	2020/07/22					<1.0	mg/L	NC	20
9931276	pH	2020/07/22			101	97 - 103			0.38	N/A
9931277	Conductivity	2020/07/22			100	80 - 120	<2.0	uS/cm	0.21	10
9931650	Nitrate plus Nitrite (N)	2020/07/22	107	80 - 120	110	80 - 120	<0.020	mg/L	2.9	25
9931651	Nitrite (N)	2020/07/22	97	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
9932284	UV absorbance (254nm)	2020/07/23			96	N/A	<0.010	AU/cm	NC	20
9932375	Total Dissolved Solids	2020/07/24	103	80 - 120	92	80 - 120	<10	mg/L	3.7	20
9933378	Total Ammonia (N)	2020/07/24	NC	80 - 120	108	80 - 120	<0.015	mg/L	0.010 (1)	20
9933761	Total Nitrogen (N)	2020/07/24	102	80 - 120	97	80 - 120	<0.020	mg/L	1.7	20
9934007	Dissolved Fluoride (F)	2020/07/24	100	80 - 120	102	80 - 120	<0.050	mg/L	0	20
9934727	Total Sulphide	2020/07/24	103	80 - 120	106	80 - 120	<0.0018	mg/L	6.9	20
9935380	Total Organic Carbon (C)	2020/07/25	104	80 - 120	100	80 - 120	<0.50	mg/L	1.2	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Detection limits raised due to dilution to bring analyte within the calibrated range.

BV Labs - Certified / FFUs / FFUs / FFUs



BUREAU
VERITAS

BV Labs Job #: C050475
Report Date: 2020/07/28

Cowichan Bay Waterworks
Sampler Initials: JW

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Harry (Peng) Liang, Senior Analyst

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs - Partial/Rush Results

WI023232



Victoria Unit 1, 3511 Viewfield Rd, Victoria, BC V9A 4V2 Ph: (250) 368-8112 Toll Free: (833) 262-3227
 Courtenay: 2755 B Stoney Ave, Courtenay, BC V9N 6M9 Ph: (250) 296-7796 Toll Free: (833) 262-6227

Company (Invoicing): COWICHAN BAY WATER DIST
 Company (Reporting): IFC WATER SOLUTIONS LTD
 Contact Name: JOE WOOLLS
 Mailing Address: _____
 Phone #: _____
 E-mail: JOE@IFC.WATER.CA

VANCOUVER ISLAND HEALTH AUTHORITY
 Medical Health Officer: 1.800.204.6186
 Drinking Water Officer: 250.755.6215

BV Job #: C050475_GOC

All information on this form must be completed before sampling.

If your drinking water source services two or more homes, we strongly recommend that you contact local health authorities to find out how the Drinking Water Protection Act applies to this system. Please be aware that, in this situation, we are legally obligated to report results directly to local health authorities.

Sample Collection

For determining drinking water quality, samples should be representative of the water that will be consumed. Therefore, we suggest sampling at the kitchen tap. However, other sampling locations may be used to determine pre-treatment water quality or for troubleshooting purposes.

1. Remove aerator/aerator from faucet.
2. Let the water run for 5 minutes.
3. Label the bottle with your name, date and time you are taking the sample.
4. Fill all bottle(s) provided. Take care not to touch the inside of the bottle or underside of cap.
5. Cap the sample and place it in fridge or small cooler with icepack.

Remember: It is important that you do not contaminate the sample as you handle the container. Wash your hands before you start and be careful not to touch the rim of the bottle or the inside of the cap.

RECEIVED IN VICTORIA
 Bureau Veritas
 JUL 20 2020 @ 14:05

DOBT:

- Don't rinse or boil any bottle you receive from the lab.
- Don't let the sample sit out overnight, please refrigerate.
- Don't freeze the sample

By: 14 15 15
 Temps: on ice

Sample Transportation & Delivery

1. Samples should arrive at the laboratories (Courtenay or Victoria) within 24 hrs of sampling. Ship samples between Monday and Thursday to avoid lab scheduling conflicts.
2. The sample should be kept cool during transit (<8°C - refrigerated or packed on ice).
3. Fill out the Chain of Custody (COC) form, include these instructions and submit with the sample. Incomplete or missing COCs will result in delays impeding turnaround time and the lab's ability to proceed with time sensitive tests.
4. Delivery Options.
 Personally deliver samples to Courtenay or Victoria (Samples will be forwarded to Burnaby on your behalf unless analysis is completed locally in Courtenay. Please consider sample hold times.)
 Overnight shipping to Burnaby: If you ship a sample on the same day that it was collected you can use an overnight courier.
 Same day shipping: Available in some areas. Please contact the lab for details.

PLEASE CIRCLE		ANALYSIS REQUESTED PLEASE SELECT BELOW	
Samples from a Drinking Water Source? Y/N Does sample supply multiple households? Y/N Are you on a hot water recirculation? Y/N Drinking Water Source: Home Sinking San Total Metals Seen including lead/copper & Hg Total Coliform and E. Coli Report Current Drinking Water Criteria	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> N	<input checked="" type="checkbox"/> Total Metals <input checked="" type="checkbox"/> Total Coliform and E. Coli	<input checked="" type="checkbox"/> X <input type="checkbox"/>

After Hours Contact #: _____
 Regular Turnaround Time (TAT) (5 days for most tests) RUSH Please contact the lab Surcharges will be applied
 Project Name: _____ Date Required: _____
 SPECIAL INSTRUCTIONS:
 Return Cooler Ship Sample Bottles (please specify)

Sample Identification Location &/or Description	Sample Location (eg. Tap, Wallhead)	Date/Time Sampled (24hr)
1 VALLEYVIEW WELL #1 RAW	PUMP STN	JULY 20/20 9:15 AM
2		
3 VALLEYVIEW WELL #2 RAW	PUMP STN	JULY 20/20 9:45 AM
4		
5		

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas Laboratories' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of the terms available at <http://www.bvlab.com/terms-and-conditions>

Released By: <u>J. WOOLLS</u>	Date (yy/mm/dd): <u>JULY 20/20</u>	Time (24 hr): <u>2:00 PM</u>	Received by: <u>WILLIAM THU</u>	Date (yy/mm/dd): <u>JULY 20/20</u>	Time (24 hr): <u>07:04</u>	Type: <input type="checkbox"/> A) <input type="checkbox"/> B) <input type="checkbox"/> C)	Temperature on Receipt (°C): _____	Cleanliness: <input type="checkbox"/> Yes <input type="checkbox"/> No	NOV: <input type="checkbox"/> NAT: <input type="checkbox"/>
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SEE ACR