

Your C.O.C. #: WI009397

Attention: Jennifer Bradley

North Cedar Improvement District
PO Box 210
2100 Yellow Point Rd
Cedar, BC
Canada V9X 1W1

Report Date: 2017/08/15

Report #: R2428363

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B764264

Received: 2017/08/01, 15:28

Sample Matrix: Water

Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Water (1)	3	2017/08/08	2017/08/08	BBY6SOP-00026	SM 22 2510 B m
Chloride by Automated Colourimetry	2	N/A	2017/08/04	BBY6SOP-00011	SM 22 4500-Cl- E m
Chloride by Automated Colourimetry	1	N/A	2017/08/09	BBY6SOP-00011	SM 22 4500-Cl- E m
True Colour (Single Wavelength) (1)	3	N/A	2017/08/04	VIC SOP-00010	SM 22 2120 C m
Conductance - water (1)	3	2017/08/08	2017/08/08	BBY6SOP-00026	SM 22 2510 B m
Fluoride	3	N/A	2017/08/04	BBY6SOP-00048	SM 22 4500-F C m
Iron Bacteria (1)	3	N/A	2017/08/02	VIC SOP-00114	SM 22 9240 m
Hardness Total (calculated as CaCO3)	3	N/A	2017/08/08	BBY WI-00033	Auto Calc
Mercury (Total) by CVAF	3	2017/08/04	2017/08/04	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Heterotropic Plate Count Water Mem. Filt (1)	3	N/A	2017/08/02	BBY4 SOP-00003	Based on SM-9215
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2017/08/08	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by CRC ICPMS (total)	3	N/A	2017/08/05	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Nitrogen (Total)	3	2017/08/08	2017/08/09	BBY6SOP-00016	SM 22 4500-N C m
Ammonia-N (Preserved)	3	N/A	2017/08/04	BBY6SOP-00009	EPA 350.1 m
Nitrate + Nitrite (N)	3	N/A	2017/08/04	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) by CFA	3	N/A	2017/08/04	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	3	N/A	2017/08/05	BBY6SOP-00010	SM 22 4500-NO3 I m
Nitrogen (Organic) (Cal. TKN, NH4,N/N)	3	N/A	2017/08/09	BBY WI-00033	Auto Calc
pH Water (1, 3)	3	N/A	2017/08/08	BBY6SOP-00026	SM-4500H+B
Sat. pH and Langelier Index (@ 4.4C)	3	N/A	2017/08/10	BBY WI-00033	Auto Calc
Sat. pH and Langelier Index (@ 60C)	3	N/A	2017/08/10	BBY WI-00033	Auto Calc
Sulphate by Automated Colourimetry	2	N/A	2017/08/04	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2017/08/09	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate Reducing Bacteria (1)	3	N/A	2017/08/02	VIC SOP-00114	SM 22 9240 m
Sulphide - total	3	N/A	2017/08/04	BBY6SOP-00006	SM 22 4500-S2- D m
Total Dissolved Solids (Filt. Residue) (1)	3	N/A	2017/08/10	VIC SOP-00008	Based on SM 2540C
Total Coliform & E.Coli by MF-Chromocult (1)	3	N/A	2017/08/02	VIC SOP 00112	Based on SM-9222
Carbon (Total Organic) (2, 4)	3	N/A	2017/08/15	CAL SOP-00077	MMCW 119 1996 m
Turbidity (1)	3	N/A	2017/08/04	VIC SOP-00011	SM 22 2130B m

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CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B764264

Received: 2017/08/01, 15:28

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam 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.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam 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 Maxxam, unless otherwise agreed in writing.

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.

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 Maxxam Victoria
- (2) This test was performed by Maxxam Calgary Environmental
- (3) The BC-MOE and APHA Standard Method require 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 BC-MOE/APHA Standard Method holding time.
- (4) TOC present in the sample should be considered as non-purgeable TOC.

Encryption Key

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

BC Env Customer Service, BC Environmental Customer Service

Email: Enviro.CS.BC@maxxam.ca

Phone# (604) 734 7276

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This report has been generated and distributed using a secure automated process.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID					RQ3498		RQ3499		
Sampling Date					2017/08/01 12:14		2017/08/01 12:35		
COC Number					WI009397		WI009397		
	UNITS	MAC	AO	OG	WELL #1	QC Batch	WELL #3	RDL	QC Batch
ANIONS									
Nitrite (N)	mg/L	1	-	-	<0.0050	8717993	<0.0050	0.0050	8717993
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	20.3	8713686	15.9	0.50	8713686
Nitrate (N)	mg/L	10	-	-	0.133	8712848	0.180	0.020	8712848
Misc. Inorganics									
Fluoride (F)	mg/L	1.5	-	-	0.040	8717622	0.030	0.010	8717622
Alkalinity (Total as CaCO3)	mg/L	-	-	-	13	8719120	8	1	8719120
Total Organic Carbon (C)	mg/L	-	-	-	<0.50	8725907	<0.50	0.50	8725907
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1	8719120	<1	1	8719120
Bicarbonate (HCO3)	mg/L	-	-	-	16.3	8719120	10.3	0.5	8719120
Carbonate (CO3)	mg/L	-	-	-	<0.5	8719120	<0.5	0.5	8719120
Hydroxide (OH)	mg/L	-	-	-	<0.5	8719120	<0.5	0.5	8719120
Anions									
Dissolved Sulphate (SO4)	mg/L	-	500	-	4.3	8717743	3.2	1.0	8721942
Dissolved Chloride (Cl)	mg/L	-	250	-	15	8717742	8.1	1.0	8721940
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5	8719636	<5	5	8719636
Nutrients									
Total Organic Nitrogen (N)	mg/L	-	-	-	0.021	8713792	0.044	0.020	8713792
Total Ammonia (N)	mg/L	-	-	-	0.024	8716722	0.012	0.0050	8716722
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.133	8717992	0.180	0.020	8717992
Total Nitrogen (N)	mg/L	-	-	-	0.178	8720047	0.236	0.020	8720047
Physical Properties									
Conductivity	uS/cm	-	-	-	97	8719139	64	2	8719139
pH	pH	-	7.0:10.5	-	6.7	8719138	6.6		8719138
Physical Properties									
Total Dissolved Solids	mg/L	-	500	-	48	8720499	39	10	8720499
Turbidity	NTU	see remark	see remark	see remark	0.1	8719675	0.1	0.1	8719675
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID					RQ3500		
Sampling Date					2017/08/01 12:55		
COC Number					WI009397		
	UNITS	MAC	AO	OG	WELL #6	RDL	QC Batch
ANIONS							
Nitrite (N)	mg/L	1	-	-	<0.0050	0.0050	8717993
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	-	-	-	18.1	0.50	8713686
Nitrate (N)	mg/L	10	-	-	0.135	0.020	8712848
Misc. Inorganics							
Fluoride (F)	mg/L	1.5	-	-	0.026	0.010	8717622
Alkalinity (Total as CaCO3)	mg/L	-	-	-	11	1	8719120
Total Organic Carbon (C)	mg/L	-	-	-	<0.50	0.50	8725907
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<1	1	8719120
Bicarbonate (HCO3)	mg/L	-	-	-	13.8	0.5	8719120
Carbonate (CO3)	mg/L	-	-	-	<0.5	0.5	8719120
Hydroxide (OH)	mg/L	-	-	-	<0.5	0.5	8719120
Anions							
Dissolved Sulphate (SO4)	mg/L	-	500	-	1.9	1.0	8717743
Dissolved Chloride (Cl)	mg/L	-	250	-	4.7	1.0	8717742
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	<5	5	8719636
Nutrients							
Total Organic Nitrogen (N)	mg/L	-	-	-	0.094	0.020	8713792
Total Ammonia (N)	mg/L	-	-	-	0.022	0.0050	8716722
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.135	0.020	8717992
Total Nitrogen (N)	mg/L	-	-	-	0.250	0.020	8720047
Physical Properties							
Conductivity	uS/cm	-	-	-	59	2	8719139
pH	pH	-	7.0:10.5	-	6.8		8719138
Physical Properties							
Total Dissolved Solids	mg/L	-	500	-	32	10	8720499
Turbidity	NTU	see remark	see remark	see remark	0.3	0.1	8719675
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							

Maxxam Job #: B764264
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North Cedar Improvement District

MERCURY BY COLD VAPOR (WATER)

Maxxam ID			RQ3498	RQ3499	RQ3500		
Sampling Date			2017/08/01 12:14	2017/08/01 12:35	2017/08/01 12:55		
COC Number			WI009397	WI009397	WI009397		
	UNITS	MAC	WELL #1	WELL #3	WELL #6	RDL	QC Batch
Elements							
Total Mercury (Hg)	ug/L	1	<0.010	<0.010	<0.010	0.010	8716860
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							

Maxxam Job #: B764264
Report Date: 2017/08/15

North Cedar Improvement District

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID					RQ3498	RQ3499	RQ3500		
Sampling Date					2017/08/01 12:14	2017/08/01 12:35	2017/08/01 12:55		
COC Number					WI009397	WI009397	WI009397		
	UNITS	MAC	AO	OG	WELL #1	WELL #3	WELL #6	RDL	QC Batch
Total Metals by ICPMS									
Total Aluminum (Al)	ug/L	-	-	100	5.2	3.9	<3.0	3.0	8716682
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	0.50	8716682
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	0.10	8716682
Total Barium (Ba)	ug/L	1000	-	-	6.7	5.2	4.4	1.0	8716682
Total Beryllium (Be)	ug/L	-	-	-	<0.10	<0.10	<0.10	0.10	8716682
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	<1.0	<1.0	1.0	8716682
Total Boron (B)	ug/L	5000	-	-	<50	<50	<50	50	8716682
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	<0.010	<0.010	0.010	8716682
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	<1.0	1.0	8716682
Total Cobalt (Co)	ug/L	-	-	-	<0.20	<0.20	<0.20	0.20	8716682
Total Copper (Cu)	ug/L	-	1000	-	3.06	3.01	1.64	0.20	8716682
Total Iron (Fe)	ug/L	-	300	-	12.0	8.9	38.2	5.0	8716682
Total Lead (Pb)	ug/L	10	-	-	<0.20	0.21	<0.20	0.20	8716682
Total Manganese (Mn)	ug/L	-	50	-	5.4	<1.0	1.1	1.0	8716682
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	<1.0	<1.0	1.0	8716682
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	<1.0	1.0	8716682
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	<0.10	0.10	8716682
Total Silicon (Si)	ug/L	-	-	-	3480	2810	3730	100	8716682
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	0.020	8716682
Total Strontium (Sr)	ug/L	-	-	-	50.7	32.1	27.9	1.0	8716682
Total Thallium (Tl)	ug/L	-	-	-	<0.010	<0.010	<0.010	0.010	8716682
Total Tin (Sn)	ug/L	-	-	-	<5.0	<5.0	<5.0	5.0	8716682
Total Titanium (Ti)	ug/L	-	-	-	<5.0	<5.0	<5.0	5.0	8716682
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	0.10	8716682
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	5.0	8716682
Total Zinc (Zn)	ug/L	-	5000	-	<5.0	<5.0	<5.0	5.0	8716682
Total Zirconium (Zr)	ug/L	-	-	-	<0.10	<0.10	<0.10	0.10	8716682
Total Calcium (Ca)	mg/L	-	-	-	6.48	5.29	5.92	0.050	8713393
Total Magnesium (Mg)	mg/L	-	-	-	0.987	0.654	0.817	0.050	8713393
Total Potassium (K)	mg/L	-	-	-	0.203	0.208	0.178	0.050	8713393
Total Sodium (Na)	mg/L	-	200	-	10.0	5.37	4.11	0.050	8713393
Total Sulphur (S)	mg/L	-	-	-	<3.0	<3.0	<3.0	3.0	8713393
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									

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North Cedar Improvement District

MICROBIOLOGY (WATER)

Maxxam ID			RQ3498	RQ3499	RQ3500		
Sampling Date			2017/08/01 12:14	2017/08/01 12:35	2017/08/01 12:55		
COC Number			WI009397	WI009397	WI009397		
	UNITS	MAC	WELL #1	WELL #3	WELL #6	RDL	QC Batch
Microbiological Param.							
Heterotrophic Plate Count	CFU/mL	-	3	1	<1	1	8719679
Iron Bacteria	CFU/mL	-	SEE NOTE (1)	SEE NOTE (2)	SEE NOTE (1)	25	8720627
Sulphate reducing bacteria	CFU/mL	-	<75	<75	<75	75	8722175
Total Coliforms	CFU/100mL	0	0	0	0	N/A	8717051
E. coli	CFU/100mL	0	0	0	0	N/A	8717051
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
N/A = Not Applicable							
(1) Report range of 500-9000 cfu/mL Iron-Related Bacteria is given.							
(2) Report range of 500-9000cfu/mL Iron-Related Bacteria is given.							

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CALCULATED PARAMETERS (WATER)

Maxxam ID		RQ3498	RQ3499	RQ3500	
Sampling Date		2017/08/01 12:14	2017/08/01 12:35	2017/08/01 12:55	
COC Number		WI009397	WI009397	WI009397	
	UNITS	WELL #1	WELL #3	WELL #6	QC Batch
Parameter					
Langelier Index (@ 4.4C)	N/A	-3.21	-3.59	-3.26	8713793
Langelier Index (@ 60C)	N/A	-2.17	-2.55	-2.22	8713794
Saturation pH (@ 4.4C)	N/A	9.93	10.2	10.0	8713793
Saturation pH (@ 60C)	N/A	8.89	9.17	8.98	8713794

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North Cedar Improvement District

MISCELLANEOUS (WATER)

Maxxam ID			RQ3498	RQ3499	RQ3500		
Sampling Date			2017/08/01 12:14	2017/08/01 12:35	2017/08/01 12:55		
COC Number			WI009397	WI009397	WI009397		
	UNITS	AO	WELL #1	WELL #3	WELL #6	RDL	QC Batch
MISCELLANEOUS							
Total Sulphide	mg/L	0.05	0.0054	0.0103	<0.0050	0.0050	8716710
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							

GENERAL COMMENTS

MAC,AO,OG: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, February 2017.

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.

Results relate only to the items tested.

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North Cedar Improvement District

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8716682	AD5	Matrix Spike	Total Aluminum (Al)	2017/08/05	106	%	80 - 120		
			Total Antimony (Sb)	2017/08/05	99	%	80 - 120		
			Total Arsenic (As)	2017/08/05	100	%	80 - 120		
			Total Barium (Ba)	2017/08/05	NC	%	80 - 120		
			Total Beryllium (Be)	2017/08/05	99	%	80 - 120		
			Total Bismuth (Bi)	2017/08/05	97	%	80 - 120		
			Total Boron (B)	2017/08/05	NC	%	80 - 120		
			Total Cadmium (Cd)	2017/08/05	98	%	80 - 120		
			Total Chromium (Cr)	2017/08/05	98	%	80 - 120		
			Total Cobalt (Co)	2017/08/05	94	%	80 - 120		
			Total Copper (Cu)	2017/08/05	NC	%	80 - 120		
			Total Iron (Fe)	2017/08/05	102	%	80 - 120		
			Total Lead (Pb)	2017/08/05	100	%	80 - 120		
			Total Manganese (Mn)	2017/08/05	95	%	80 - 120		
			Total Molybdenum (Mo)	2017/08/05	102	%	80 - 120		
			Total Nickel (Ni)	2017/08/05	97	%	80 - 120		
			Total Selenium (Se)	2017/08/05	100	%	80 - 120		
			Total Silver (Ag)	2017/08/05	104	%	80 - 120		
			Total Strontium (Sr)	2017/08/05	NC	%	80 - 120		
			Total Thallium (Tl)	2017/08/05	100	%	80 - 120		
			Total Tin (Sn)	2017/08/05	100	%	80 - 120		
			Total Titanium (Ti)	2017/08/05	91	%	80 - 120		
			Total Uranium (U)	2017/08/05	103	%	80 - 120		
			Total Vanadium (V)	2017/08/05	98	%	80 - 120		
			Total Zinc (Zn)	2017/08/05	97	%	80 - 120		
			8716682	AD5	Spiked Blank	Total Aluminum (Al)	2017/08/05	109	%
Total Antimony (Sb)	2017/08/05	102				%	80 - 120		
Total Arsenic (As)	2017/08/05	102				%	80 - 120		
Total Barium (Ba)	2017/08/05	103				%	80 - 120		
Total Beryllium (Be)	2017/08/05	100				%	80 - 120		
Total Bismuth (Bi)	2017/08/05	100				%	80 - 120		
Total Boron (B)	2017/08/05	97				%	80 - 120		
Total Cadmium (Cd)	2017/08/05	102				%	80 - 120		
Total Chromium (Cr)	2017/08/05	101				%	80 - 120		
Total Cobalt (Co)	2017/08/05	98				%	80 - 120		
Total Copper (Cu)	2017/08/05	100				%	80 - 120		
Total Iron (Fe)	2017/08/05	102				%	80 - 120		
Total Lead (Pb)	2017/08/05	104				%	80 - 120		
Total Manganese (Mn)	2017/08/05	97				%	80 - 120		
Total Molybdenum (Mo)	2017/08/05	101				%	80 - 120		
Total Nickel (Ni)	2017/08/05	101				%	80 - 120		
Total Selenium (Se)	2017/08/05	105				%	80 - 120		
Total Silver (Ag)	2017/08/05	106				%	80 - 120		
Total Strontium (Sr)	2017/08/05	97				%	80 - 120		
Total Thallium (Tl)	2017/08/05	102				%	80 - 120		
Total Tin (Sn)	2017/08/05	100				%	80 - 120		
Total Titanium (Ti)	2017/08/05	101				%	80 - 120		
Total Uranium (U)	2017/08/05	102				%	80 - 120		
Total Vanadium (V)	2017/08/05	100				%	80 - 120		
Total Zinc (Zn)	2017/08/05	100				%	80 - 120		
8716682	AD5	Method Blank				Total Aluminum (Al)	2017/08/05	<3.0	ug/L
			Total Antimony (Sb)	2017/08/05	<0.50	ug/L			
			Total Arsenic (As)	2017/08/05	<0.10	ug/L			
			Total Barium (Ba)	2017/08/05	<1.0	ug/L			
			Total Beryllium (Be)	2017/08/05	<0.10	ug/L			

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Bismuth (Bi)	2017/08/05	<1.0		ug/L	
			Total Boron (B)	2017/08/05	<50		ug/L	
			Total Cadmium (Cd)	2017/08/05	<0.010		ug/L	
			Total Chromium (Cr)	2017/08/05	<1.0		ug/L	
			Total Cobalt (Co)	2017/08/05	<0.20		ug/L	
			Total Copper (Cu)	2017/08/05	<0.20		ug/L	
			Total Iron (Fe)	2017/08/05	<5.0		ug/L	
			Total Lead (Pb)	2017/08/05	<0.20		ug/L	
			Total Manganese (Mn)	2017/08/05	<1.0		ug/L	
			Total Molybdenum (Mo)	2017/08/05	<1.0		ug/L	
			Total Nickel (Ni)	2017/08/05	<1.0		ug/L	
			Total Selenium (Se)	2017/08/05	<0.10		ug/L	
			Total Silicon (Si)	2017/08/05	<100		ug/L	
			Total Silver (Ag)	2017/08/05	<0.020		ug/L	
			Total Strontium (Sr)	2017/08/05	<1.0		ug/L	
			Total Thallium (Tl)	2017/08/05	<0.010		ug/L	
			Total Tin (Sn)	2017/08/05	<5.0		ug/L	
			Total Titanium (Ti)	2017/08/05	<5.0		ug/L	
			Total Uranium (U)	2017/08/05	<0.10		ug/L	
			Total Vanadium (V)	2017/08/05	<5.0		ug/L	
			Total Zinc (Zn)	2017/08/05	<5.0		ug/L	
			Total Zirconium (Zr)	2017/08/05	<0.10		ug/L	
8716682	AD5	RPD	Total Aluminum (Al)	2017/08/05	NC		%	20
			Total Antimony (Sb)	2017/08/05	NC		%	20
			Total Arsenic (As)	2017/08/05	NC		%	20
			Total Barium (Ba)	2017/08/05	2.1		%	20
			Total Beryllium (Be)	2017/08/05	NC		%	20
			Total Bismuth (Bi)	2017/08/05	NC		%	20
			Total Boron (B)	2017/08/05	0.45		%	20
			Total Cadmium (Cd)	2017/08/05	NC		%	20
			Total Chromium (Cr)	2017/08/05	NC		%	20
			Total Cobalt (Co)	2017/08/05	NC		%	20
			Total Copper (Cu)	2017/08/05	0.52		%	20
			Total Iron (Fe)	2017/08/05	1.9		%	20
			Total Lead (Pb)	2017/08/05	2.6		%	20
			Total Manganese (Mn)	2017/08/05	NC		%	20
			Total Molybdenum (Mo)	2017/08/05	NC		%	20
			Total Nickel (Ni)	2017/08/05	NC		%	20
			Total Selenium (Se)	2017/08/05	0.54		%	20
			Total Silicon (Si)	2017/08/05	0.71		%	20
			Total Silver (Ag)	2017/08/05	NC		%	20
			Total Strontium (Sr)	2017/08/05	1.6		%	20
			Total Thallium (Tl)	2017/08/05	NC		%	20
			Total Tin (Sn)	2017/08/05	NC		%	20
			Total Titanium (Ti)	2017/08/05	NC		%	20
			Total Uranium (U)	2017/08/05	2.9		%	20
			Total Vanadium (V)	2017/08/05	NC		%	20
			Total Zinc (Zn)	2017/08/05	1.7		%	20
			Total Zirconium (Zr)	2017/08/05	NC		%	20
8716710	MCN	Matrix Spike [RQ3500-07]	Total Sulphide	2017/08/04		100	%	80 - 120
8716710	MCN	Spiked Blank	Total Sulphide	2017/08/04		94	%	80 - 120
8716710	MCN	Method Blank	Total Sulphide	2017/08/04	<0.0050		mg/L	
8716710	MCN	RPD [RQ3499-07]	Total Sulphide	2017/08/04	0.81		%	20
8716722	CK	Matrix Spike	Total Ammonia (N)	2017/08/04		NC	%	80 - 120
8716722	CK	Spiked Blank	Total Ammonia (N)	2017/08/04		99	%	80 - 120

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8716722	CK	Method Blank	Total Ammonia (N)	2017/08/04	<0.0050		mg/L	
8716722	CK	RPD	Total Ammonia (N)	2017/08/04	2.3		%	20
8716860	EL2	Matrix Spike [RQ3498-05]	Total Mercury (Hg)	2017/08/04		100	%	80 - 120
8716860	EL2	Spiked Blank	Total Mercury (Hg)	2017/08/04		99	%	80 - 120
8716860	EL2	Method Blank	Total Mercury (Hg)	2017/08/04	<0.010		ug/L	
8716860	EL2	RPD [RQ3498-05]	Total Mercury (Hg)	2017/08/04	NC		%	20
8717051	JHW	RPD	Total Coliforms	2017/08/02	NC		%	N/A
			E. coli	2017/08/02	NC		%	N/A
			Total Coliforms	2017/08/02	NC		%	N/A
			E. coli	2017/08/02	NC		%	N/A
			Total Coliforms	2017/08/02	NC		%	N/A
			E. coli	2017/08/02	NC		%	N/A
			Total Coliforms	2017/08/02	NC		%	N/A
			E. coli	2017/08/02	NC		%	N/A
8717622	TSO	Matrix Spike	Fluoride (F)	2017/08/04		NC	%	80 - 120
8717622	TSO	Spiked Blank	Fluoride (F)	2017/08/04		102	%	80 - 120
8717622	TSO	Method Blank	Fluoride (F)	2017/08/04	0.014, RDL=0.010		mg/L	
8717622	TSO	RPD	Fluoride (F)	2017/08/04	0		%	20
8717742	DC6	Spiked Blank	Dissolved Chloride (Cl)	2017/08/04		105	%	80 - 120
8717742	DC6	Method Blank	Dissolved Chloride (Cl)	2017/08/04	<1.0		mg/L	
8717743	DC6	Spiked Blank	Dissolved Sulphate (SO4)	2017/08/04		105	%	80 - 120
8717743	DC6	Method Blank	Dissolved Sulphate (SO4)	2017/08/04	<1.0		mg/L	
8717992	IW1	Matrix Spike	Nitrate plus Nitrite (N)	2017/08/04		102	%	80 - 120
8717992	IW1	Spiked Blank	Nitrate plus Nitrite (N)	2017/08/04		109	%	80 - 120
8717992	IW1	Method Blank	Nitrate plus Nitrite (N)	2017/08/04	<0.020		mg/L	
8717992	IW1	RPD	Nitrate plus Nitrite (N)	2017/08/04	NC		%	25
8717993	IW1	Matrix Spike	Nitrite (N)	2017/08/04		101	%	80 - 120
8717993	IW1	Spiked Blank	Nitrite (N)	2017/08/04		105	%	80 - 120
8717993	IW1	Method Blank	Nitrite (N)	2017/08/04	<0.0050		mg/L	
8717993	IW1	RPD	Nitrite (N)	2017/08/04	NC		%	20
8719120	JHW	Matrix Spike [RQ3498-01]	Alkalinity (Total as CaCO3)	2017/08/08		101	%	80 - 120
8719120	JHW	Spiked Blank	Alkalinity (Total as CaCO3)	2017/08/08		94	%	80 - 120
8719120	JHW	Method Blank	Alkalinity (Total as CaCO3)	2017/08/08	<1		mg/L	
			Alkalinity (PP as CaCO3)	2017/08/08	<1		mg/L	
			Bicarbonate (HCO3)	2017/08/08	<1		mg/L	
			Carbonate (CO3)	2017/08/08	<1		mg/L	
			Hydroxide (OH)	2017/08/08	<1		mg/L	
8719120	JHW	RPD [RQ3498-01]	Alkalinity (Total as CaCO3)	2017/08/08	1.6		%	20
			Alkalinity (PP as CaCO3)	2017/08/08	NC		%	20
			Bicarbonate (HCO3)	2017/08/08	1.6		%	20
			Carbonate (CO3)	2017/08/08	NC		%	20
			Hydroxide (OH)	2017/08/08	NC		%	20
8719138	JHW	Spiked Blank	pH	2017/08/08		100	%	96 - 104
8719138	JHW	RPD [RQ3498-01]	pH	2017/08/08	0.15		%	20
8719139	JHW	Spiked Blank	Conductivity	2017/08/08		103	%	90 - 110
8719139	JHW	Method Blank	Conductivity	2017/08/08	<2		uS/cm	
8719139	JHW	RPD [RQ3498-01]	Conductivity	2017/08/08	1.5		%	20
8719636	DKE	Spiked Blank	True Colour	2017/08/04		104	%	80 - 120
8719636	DKE	Method Blank	True Colour	2017/08/04	<5		Col. Unit	
8719636	DKE	RPD [RQ3498-01]	True Colour	2017/08/04	NC		%	10
8719675	JHW	Spiked Blank	Turbidity	2017/08/04		100	%	80 - 120
8719675	JHW	Method Blank	Turbidity	2017/08/04	<0.1		NTU	
8719675	JHW	RPD	Turbidity	2017/08/04	0		%	20
8719679	JHW	RPD [RQ3498-08]	Heterotrophic Plate Count	2017/08/02	NC		%	N/A

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8720047	DC6	Matrix Spike	Total Nitrogen (N)	2017/08/09		89	%	80 - 120
8720047	DC6	Spiked Blank	Total Nitrogen (N)	2017/08/09		96	%	80 - 120
8720047	DC6	Method Blank	Total Nitrogen (N)	2017/08/09	<0.020		mg/L	
8720047	DC6	RPD	Total Nitrogen (N)	2017/08/09	1.4		%	20
8720499	OMA	Spiked Blank	Total Dissolved Solids	2017/08/10		99	%	80 - 120
8720499	OMA	Method Blank	Total Dissolved Solids	2017/08/10	<10		mg/L	
8720499	OMA	RPD [RQ3498-01]	Total Dissolved Solids	2017/08/10	14		%	20
8721940	BB3	Spiked Blank	Dissolved Chloride (Cl)	2017/08/09		105	%	80 - 120
8721940	BB3	Method Blank	Dissolved Chloride (Cl)	2017/08/09	<1.0		mg/L	
8721942	BB3	Matrix Spike	Dissolved Sulphate (SO4)	2017/08/09		NC	%	80 - 120
8721942	BB3	Spiked Blank	Dissolved Sulphate (SO4)	2017/08/09		100	%	80 - 120
8721942	BB3	Method Blank	Dissolved Sulphate (SO4)	2017/08/09	<1.0		mg/L	
8721942	BB3	RPD	Dissolved Sulphate (SO4)	2017/08/09	1.6		%	20
8725907	KGH	Matrix Spike [RQ3498-09]	Total Organic Carbon (C)	2017/08/15		115	%	80 - 120
8725907	KGH	Spiked Blank	Total Organic Carbon (C)	2017/08/15		114	%	80 - 120
8725907	KGH	Method Blank	Total Organic Carbon (C)	2017/08/15	<0.50		mg/L	
8725907	KGH	RPD [RQ3498-09]	Total Organic Carbon (C)	2017/08/15	NC		%	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).

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VALIDATION SIGNATURE PAGE

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



David Nadler, AASc, Victoria Operations Manager



Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

NCID
Company: North Cedar Improvement District

Maxxam Job #: B764264

Contact Name: Joe Woolls

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.

Mailing Address: _____

All information on this form must be completed before testing can commence

Phone #: _____

Please note your invoice may be subject to a \$60 minimum bill.

E-mail: _____

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 Date Required: _____

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.

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.

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

PLEASE CIRCLE				ANALYSIS REQUESTED PLEASE SELECT BELOW				Report Drinking Water Criteria DWG14
Does source supply multiple households? Y/N	Are individuals drinking this water? Y/N	Are you on a boil water advisory? Y/N	Drinking Water Scan	Home Safety Scan	Total Metals Scan including Hardness & Hg	Total Coliform and E. Coll		
Y	Y	Y					VITA	X
N	N	N						X
N	N	N						X
Y	Y	Y						X
N	N	N						X
Y	Y	Y						X
N	N	N						X

Sample Identification (Sample Location &/or Description)	Sample Location (eg. Tap, Wellhead)	Date/Time Sampled (24hr)
1 well #1		2017/08/01 12:14
2 well #3		2017/08/01 12:35
3 well #6		2017/08/01 12:55
4		
5		

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 beside these instructions and submit with the sample. Incomplete or missing COC's 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
Overnight shipping: If you ship a sample on the same day that it was collected you can use an overnight courier.
Same day shipping: Available from Ken's Transfer, Ace Courier, and Greyhound (Courtenay only). Please contact the lab for details.

Print name and sign		Print name and sign		Laboratory Use Only							
*Relinquished By:	Date (yy/mm/dd):	Time (24 hr):	Received by:	Date (yy/mm/dd):	Time (24hr):	Time Sensitive	Temperature on Receipt (°C)	Custody Seal	Yes	No	N/A
J. Crossley	2017/08/01	15:26	Shirley Stewart-Grey	2017/08/01	15:28	<input type="checkbox"/>	A) 13 B) 14 C) 16	Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
							Just sampled & rec'd on ice: <input type="checkbox"/>	Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>