

Your C.O.C. #: 486040-01-01

Attention:Greg Foss

TOWN OF GIBSONS
474 South Fletcher
Gibsons, BC
CANADA V0N 1V0

Report Date: 2016/02/02

Report #: R2125369

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B606086

Received: 2016/01/27, 08:00

Sample Matrix: DRINKING WATER
Samples Received: 3

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Alkalinity - Water	3	2016/01/27	2016/01/28	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	3	N/A	2016/01/27	BBY6SOP-00011	SM 22 4500-Cl- G m
Colour (True) by Kone Lab	3	N/A	2016/01/28	BBY6SOP-00057	SM 22 2120 C m
Total Coliforms & E.coli Potable W- MF	3	N/A	2016/01/27	BBY4SOP-00001	SM 22 9222 m
Conductance - water	3	N/A	2016/01/28	BBY6SOP-00026	SM 22 2510 B m
Fluoride	3	N/A	2016/01/28	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	3	N/A	2016/02/01	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	3	N/A	2016/02/02	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Total) by CVAF	3	2016/02/02	2016/02/02	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	3	N/A	2016/02/02	BBY7SOP-00002	EPA 6020A R1 m
Elements by CRC ICPMS (dissolved)	3	N/A	2016/02/01	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2016/02/01	BBY7SOP-00002	EPA 6020A R1 m
Elements by CRC ICPMS (total)	3	N/A	2016/02/01	BBY7SOP-00002	EPA 6020A R1 m
Nitrate + Nitrite (N)	3	N/A	2016/01/27	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) by CFA	3	N/A	2016/01/27	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	3	N/A	2016/01/28	BBY6SOP-00010	SM 22 4500-NO3 I m
Filter and HNO3 Preserve for Metals	3	N/A	2016/01/27	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (1)	3	N/A	2016/01/28	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	2	N/A	2016/01/27	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2016/01/28	BBY6SOP-00017	SM 22 4500-SO42- E m
Total Dissolved Solids (Filt. Residue)	3	2016/01/28	2016/01/29	BBY6SOP-00033	SM 22 2540 C m
Turbidity	3	N/A	2016/01/28	BBY6SOP-00027	SM 22 2130 B m

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) 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.

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CERTIFICATE OF ANALYSIS

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Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

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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.

CT-ENHANCED POTABILITY (DRINKING WATER)

Maxxam ID		OA1906		OA1907		OA1908		
Sampling Date		2016/01/26 10:00		2016/01/26 10:00		2016/01/26 10:00		
COC Number		486040-01-01		486040-01-01		486040-01-01		
	UNITS	WELL #1	QC Batch	WELL #3	QC Batch	WELL #4	RDL	QC Batch
ANIONS								
Nitrite (N)	mg/L	<0.0050	8176906	<0.0050	8176906	<0.0050	0.0050	8176906
Calculated Parameters								
Filter and HNO3 Preservation	N/A	LAB	8176115	LAB	8176115	LAB	N/A	8176115
Total Hardness (CaCO3)	mg/L	41.5	8175905	49.9	8175905	38.8	0.50	8175905
Nitrate (N)	mg/L	0.427	8176074	1.08	8176074	0.393	0.020	8176074
Misc. Inorganics								
Fluoride (F)	mg/L	0.066	8178412	0.054	8178412	0.051	0.010	8178412
Dissolved Hardness (CaCO3)	mg/L	41.5	8175950	50.8	8175950	39.3	0.50	8175950
Alkalinity (Total as CaCO3)	mg/L	43.1	8176880	51.2	8176880	42.7	0.50	8176880
Alkalinity (PP as CaCO3)	mg/L	<0.50	8176880	<0.50	8176880	<0.50	0.50	8176880
Bicarbonate (HCO3)	mg/L	52.6	8176880	62.4	8176880	52.1	0.50	8176880
Carbonate (CO3)	mg/L	<0.50	8176880	<0.50	8176880	<0.50	0.50	8176880
Hydroxide (OH)	mg/L	<0.50	8176880	<0.50	8176880	<0.50	0.50	8176880
Anions								
Dissolved Sulphate (SO4)	mg/L	7.70	8176756	6.61	8178036	4.90	0.50	8176756
Dissolved Chloride (Cl)	mg/L	3.1	8176755	6.6	8176755	3.4	0.50	8176755
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	8178714	<5.0	8178714	<5.0	5.0	8178714
Nutrients								
Nitrate plus Nitrite (N)	mg/L	0.427	8176905	1.08	8176905	0.393	0.020	8176905
Physical Properties								
Conductivity	uS/cm	113	8176885	136	8176885	107	1.0	8176885
pH	pH	7.94	8176884	7.76	8176884	7.86		8176884
Physical Properties								
Total Dissolved Solids	mg/L	110	8177289	136	8177289	102	10	8177289
Turbidity	NTU	<0.10	8177275	0.14	8177275	<0.10	0.10	8177275
Elements								
Total Mercury (Hg)	ug/L	<0.010	8180728	<0.010	8180728	<0.010	0.010	8180728
Dissolved Metals by ICPMS								
Dissolved Iron (Fe)	ug/L	5.1	8177339	5.9	8177339	7.4	5.0	8177339
Dissolved Manganese (Mn)	ug/L	<1.0	8177339	<1.0	8177339	<1.0	1.0	8177339
Dissolved Silicon (Si)	ug/L	19700	8177339	22600	8177339	19600	100	8177339
Dissolved Calcium (Ca)	mg/L	8.88	8175951	10.0	8175951	7.86	0.050	8175951
Dissolved Magnesium (Mg)	mg/L	4.69	8175951	6.27	8175951	4.77	0.050	8175951
Dissolved Potassium (K)	mg/L	2.54	8175951	2.87	8175951	2.49	0.050	8175951
Dissolved Sodium (Na)	mg/L	6.60	8175951	7.95	8175951	6.14	0.050	8175951
RDL = Reportable Detection Limit N/A = Not Applicable								

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CT-ENHANCED POTABILITY (DRINKING WATER)

Maxxam ID		OA1906		OA1907		OA1908		
Sampling Date		2016/01/26 10:00		2016/01/26 10:00		2016/01/26 10:00		
COC Number		486040-01-01		486040-01-01		486040-01-01		
	UNITS	WELL #1	QC Batch	WELL #3	QC Batch	WELL #4	RDL	QC Batch
Total Metals by ICPMS								
Total Aluminum (Al)	ug/L	<3.0	8177639	<3.0	8177639	<3.0	3.0	8177639
Total Antimony (Sb)	ug/L	<0.50	8177639	<0.50	8177639	<0.50	0.50	8177639
Total Arsenic (As)	ug/L	3.95	8177639	2.43	8177639	3.89	0.10	8177639
Total Barium (Ba)	ug/L	2.7	8177639	3.1	8177639	3.0	1.0	8177639
Total Boron (B)	ug/L	<50	8177639	<50	8177639	<50	50	8177639
Total Cadmium (Cd)	ug/L	<0.010	8177639	<0.010	8177639	<0.010	0.010	8177639
Total Chromium (Cr)	ug/L	<1.0	8177639	<1.0	8177639	<1.0	1.0	8177639
Total Copper (Cu)	ug/L	2.51	8177639	7.13	8177639	3.52	0.20	8177639
Total Iron (Fe)	ug/L	<5.0	8177639	17.0	8177639	17.2	5.0	8177639
Total Lead (Pb)	ug/L	<0.20	8177639	0.62	8177639	0.31	0.20	8177639
Total Manganese (Mn)	ug/L	<1.0	8177639	2.8	8177639	<1.0	1.0	8177639
Total Mercury (Hg)	ug/L	<0.050	8177639	<0.050	8177639	<0.050	0.050	8177639
Total Selenium (Se)	ug/L	0.55	8177639	0.28	8177639	0.35	0.10	8177639
Total Uranium (U)	ug/L	0.24	8177639	0.16	8177639	0.16	0.10	8177639
Total Zinc (Zn)	ug/L	6.3	8177639	<5.0	8177639	<5.0	5.0	8177639
Total Magnesium (Mg)	mg/L	4.75	8176298	6.06	8176298	4.60	0.050	8176298
Microbiological Param.								
Total Coliforms	CFU/100mL	<1	8176540	<1	8176540	<1	1	8176540
E. coli	CFU/100mL	<1	8176540	<1	8176540	<1	1	8176540
RDL = Reportable Detection Limit								

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GENERAL COMMENTS

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

TOWN OF GIBSONS

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8176755	Dissolved Chloride (Cl)	2016/01/27			100	80 - 120	<0.50	mg/L		
8176756	Dissolved Sulphate (SO4)	2016/01/27	NC	80 - 120	94	80 - 120	<0.50	mg/L	3.9	20
8176880	Alkalinity (PP as CaCO3)	2016/01/28					<0.50	mg/L		
8176880	Alkalinity (Total as CaCO3)	2016/01/28	NC	80 - 120	97	80 - 120	<0.50	mg/L		
8176880	Bicarbonate (HCO3)	2016/01/28					<0.50	mg/L		
8176880	Carbonate (CO3)	2016/01/28					<0.50	mg/L		
8176880	Hydroxide (OH)	2016/01/28					<0.50	mg/L		
8176884	pH	2016/01/28			102	97 - 103			0.60	N/A
8176885	Conductivity	2016/01/28			100	80 - 120	1.3, RDL=1.0	uS/cm		
8176905	Nitrate plus Nitrite (N)	2016/01/27	105	80 - 120	108	80 - 120	<0.020	mg/L	NC	25
8176906	Nitrite (N)	2016/01/27	97	80 - 120	101	80 - 120	<0.0050	mg/L	NC	20
8177275	Turbidity	2016/01/28			97	80 - 120	<0.10	NTU	NC	20
8177289	Total Dissolved Solids	2016/01/29			108	80 - 120	12, RDL=10	mg/L	NC	20
8177339	Dissolved Iron (Fe)	2016/02/01	NC	80 - 120	104	80 - 120	<5.0	ug/L	0.61	20
8177339	Dissolved Manganese (Mn)	2016/02/01	NC	80 - 120	98	80 - 120	<1.0	ug/L	2.5	20
8177339	Dissolved Silicon (Si)	2016/02/01					<100	ug/L	0.44	20
8177639	Total Aluminum (Al)	2016/02/01	103	80 - 120	111	80 - 120	<3.0	ug/L	NC	20
8177639	Total Antimony (Sb)	2016/02/01	114	80 - 120	106	80 - 120	<0.50	ug/L	NC	20
8177639	Total Arsenic (As)	2016/02/01	108	80 - 120	105	80 - 120	<0.10	ug/L	7.2	20
8177639	Total Barium (Ba)	2016/02/01	110	80 - 120	104	80 - 120	<1.0	ug/L	NC	20
8177639	Total Boron (B)	2016/02/01	NC	80 - 120	109	80 - 120	<50	ug/L	NC	20
8177639	Total Cadmium (Cd)	2016/02/01	115	80 - 120	107	80 - 120	<0.010	ug/L	NC	20
8177639	Total Chromium (Cr)	2016/02/01	107	80 - 120	104	80 - 120	<1.0	ug/L	NC	20
8177639	Total Copper (Cu)	2016/02/01	NC	80 - 120	102	80 - 120	<0.20	ug/L	6.8	20
8177639	Total Iron (Fe)	2016/02/01	116	80 - 120	110	80 - 120	<5.0	ug/L	NC	20
8177639	Total Lead (Pb)	2016/02/01	114	80 - 120	105	80 - 120	<0.20	ug/L	NC	20
8177639	Total Manganese (Mn)	2016/02/01	107	80 - 120	108	80 - 120	<1.0	ug/L	NC	20
8177639	Total Mercury (Hg)	2016/02/01	119	80 - 120	110	80 - 120	<0.050	ug/L		
8177639	Total Selenium (Se)	2016/02/01	109	80 - 120	100	80 - 120	<0.10	ug/L	NC	20
8177639	Total Uranium (U)	2016/02/01	118	80 - 120	105	80 - 120	<0.10	ug/L	NC	20
8177639	Total Zinc (Zn)	2016/02/01	NC	80 - 120	105	80 - 120	<5.0	ug/L	NC	20
8178036	Dissolved Sulphate (SO4)	2016/01/28	114	80 - 120	99	80 - 120	<0.50	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

TOWN OF GIBSONS

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8178412	Fluoride (F)	2016/01/28	96	80 - 120	98	80 - 120	<0.010	mg/L	3.8	20
8178714	True Colour	2016/01/28			105	80 - 120	<5.0	Col. Unit	1.4	20
8180728	Total Mercury (Hg)	2016/02/02	99	80 - 120	106	80 - 120	<0.010	ug/L	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 spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

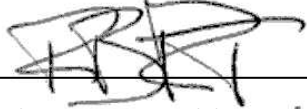
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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TOWN OF GIBSONS

VALIDATION SIGNATURE PAGE

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



Rob Reinert, Data Validation Coordinator

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.



Maxxam Analytics International Corporation o/a Maxxam Analytics
 4600 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel: (604) 734 7276 Toll-Free 800-553-6256 Fax (604) 731 2386 www.maxxam.ca

Chain Of Custody Record

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INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#2371 TOWN OF GIBSONS	Company Name		Quotation #	B10574	Maxxam Job #	B606086
Contact Name	Greg Foss	Contact Name		P.O. #		Bottle Order #:	485040
Address	474 South Fletcher Gibsons BC V0N 1V0	Address		Project #		Chain Of Custody Record	Project Manager
Phone	(604) 741-1020 Fax: (604) 886-9735	Phone		Project Name		Site #	Morgan Melnychuk
Email	greg.foss@gibsons.ca, wvtp@gibsons.ca	Email		Site #		Sampled By	

Regulatory Criteria:	Special Instructions	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)						Turnaround Time (TAT) Required:
<input type="checkbox"/> CSR <input type="checkbox"/> CCME <input type="checkbox"/> BC Water Quality <input type="checkbox"/> Other: _____								Please provide advance notice for rush projects Regular (Standard) TAT: (will be applied if Rush TAT is not specified): <input type="checkbox"/> Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission) 1 DAY <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> Date Required: _____ <input type="checkbox"/> Rush Confirmation Number: _____ (call lab for #)

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Filtered ? (Y/N)	Enhanced Potability	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)						# of Bottles	Comments
1 OA1906	Well # 1					✓								
2 OA1907	Well # 3					✓								
3 OA1908	Well # 4					✓								
4														
5														
6														
7														
8														
9														
10														



* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Time Sensitive	Temperature (°C) on Receipt	Custody Being Held on Cooler?
STEVE	16 01 26	10:00	[Signature]	2016/01/27	08:00		<input type="checkbox"/>	11.3	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

Maxxam Analytics International Corporation o/a Maxxam Analytics