

Your C.O.C. #: G089278, G089281

Attention:Bob Weir

Town of Qualicum Beach
201-660 Primrose St
P.O. Box 130
Qualicum Beach, BC
Canada V9K 1S7

Report Date: 2014/10/27

Report #: R1672605

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B494082

Received: 2014/10/17, 09:40

Sample Matrix: Water
Samples Received: 8

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Colour (True)	8	N/A	2014/10/18	BBY6SOP-00021	SM 22 2120 B m
Hardness Total (calculated as CaCO3)	8	N/A	2014/10/23	BBY7SOP-00002	EPA 6020a R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	8	2014/10/17	2014/10/23	BBY7SOP-00002	EPA 6020A R1 m
Elements by CRC ICPMS (total)	8	2014/10/21	2014/10/23	BBY7SOP-00002	EPA 6020A R1 m
Nitrogen (Total)	7	2014/10/18	2014/10/20	BBY6SOP-00016	SM 22 4500-N C m
Nitrogen (Total)	1	2014/10/24	2014/10/27	BBY6SOP-00016	SM 22 4500-N C m
Ammonia-N (Preserved)	7	N/A	2014/10/21	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	1	N/A	2014/10/24	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate + Nitrite (N)	8	N/A	2014/10/18	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) by CFA	8	N/A	2014/10/18	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	8	N/A	2014/10/18	BBY6SOP-00010	SM 22 4500-NO3 I m
pH Water (1)	8	N/A	2014/10/18	BBY6SOP-00026	SM 22 4500-H+ B m
Total Dissolved Solids (Filt. Residue)	5	2014/10/20	2014/10/21	BBY6SOP-00033	SM 22 2540 C m
Total Dissolved Solids (Filt. Residue)	3	2014/10/21	2014/10/22	BBY6SOP-00033	SM 22 2540 C m
TKN (Calc. TN, N/N) total	8	N/A	2014/10/21	BBY6SOP-00022	SM 4500N-C
Carbon (Total Organic) (2)	8	N/A	2014/10/22	BBY6SOP-00003	SM 22 5310 C m
Total Phosphorus	8	N/A	2014/10/20	BBY6SOP-00013	SM 22 4500-P E m
Turbidity	8	N/A	2014/10/18	BBY6SOP-00027	SM 22 2130 B m

* 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.

(2) TOC present in the sample should be considered as non-purgeable TOC.

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CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B494082
Received: 2014/10/17, 09:40

Encryption Key

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

Jared Rudek, Project Manager

Email: JRudek@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.

Maxxam Job #: B494082
Report Date: 2014/10/27

Town of Qualicum Beach
Sampler Initials: SW

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID					KW9436	KW9437	KW9438	
Sampling Date					2014/10/16 07:40	2014/10/16 07:53	2014/10/16 08:15	
COC Number					G089278	G089278	G089278	
	Units	Criteria A	Criteria B	Criteria C	RIVER WELL #1	RIVER WELL #3	RIVER WELL #5	RDL
ANIONS								
Nitrite (N)	mg/L	1	-	-	<0.0050	<0.0050	<0.0050	0.0050
Calculated Parameters								
Nitrate (N)	mg/L	10	-	-	0.151	0.152	0.289	0.020
Misc. Inorganics								
Total Organic Carbon (C)	mg/L	-	-	-	0.68	1.56	1.36	0.50
MISCELLANEOUS								
True Colour	Col. Unit	-	15	-	<5.0	<5.0	<5.0	5.0
Nutrients								
Total Ammonia (N)	mg/L	-	-	-	0.012	0.037	0.014	0.0050
Total Total Kjeldahl Nitrogen (Calc)	mg/L	-	-	-	<0.020	<0.020	<0.020	0.020
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.151	0.152	0.289	0.020
Total Nitrogen (N)	mg/L	-	-	-	0.149	0.147	0.270	0.020
Total Phosphorus (P)	mg/L	-	-	-	<0.0050	<0.0050	<0.0050	0.0050
Physical Properties								
pH	pH	-	6.5:8.5	-	7.64	7.45	7.47	N/A
Physical Properties								
Total Dissolved Solids	mg/L	-	500	-	60	52	56	10
Turbidity	NTU	see remark	see remark	see remark	0.12	0.13	<0.10	0.10
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B494082
Report Date: 2014/10/27

Town of Qualicum Beach
Sampler Initials: SW

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID					KW9439	KW9440	KW9471	
Sampling Date					2014/10/16 08:05	2014/10/16 08:24	2014/10/16 08:56	
COC Number					G089278	G089278	G089281	
	Units	Criteria A	Criteria B	Criteria C	RIVER WELL #6	RIVER WELL #7	BERWICK WELL #1	RDL
ANIONS								
Nitrite (N)	mg/L	1	-	-	<0.0050	<0.0050	<0.0050	0.0050
Calculated Parameters								
Nitrate (N)	mg/L	10	-	-	0.210	0.168	0.486	0.020
Misc. Inorganics								
Total Organic Carbon (C)	mg/L	-	-	-	1.86	<0.50	1.72	0.50
MISCELLANEOUS								
True Colour	Col. Unit	-	15	-	<5.0	<5.0	<5.0	5.0
Nutrients								
Total Ammonia (N)	mg/L	-	-	-	0.012	0.013	0.028	0.0050
Total Total Kjeldahl Nitrogen (Calc)	mg/L	-	-	-	<0.020	<0.020	<0.020	0.020
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.210	0.168	0.486	0.020
Total Nitrogen (N)	mg/L	-	-	-	0.224	0.172	0.486	0.020
Total Phosphorus (P)	mg/L	-	-	-	<0.0050	<0.0050	0.0139	0.0050
Physical Properties								
pH	pH	-	6.5:8.5	-	7.62	7.73	7.90	N/A
Physical Properties								
Total Dissolved Solids	mg/L	-	500	-	66	88	172	10
Turbidity	NTU	see remark	see remark	see remark	0.22	0.15	0.11	0.10
RDL = Reportable Detection Limit N/A = Not Applicable								

Maxxam Job #: B494082
Report Date: 2014/10/27

Town of Qualicum Beach
Sampler Initials: SW

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID					KW9472	KW9473	
Sampling Date					2014/10/16 08:40	2014/10/16 08:46	
COC Number					G089281	G089281	
	Units	Criteria A	Criteria B	Criteria C	BERWICK WELL #2	BERWICK WELL #3	RDL
ANIONS							
Nitrite (N)	mg/L	1	-	-	<0.0050	<0.0050	0.0050
Calculated Parameters							
Nitrate (N)	mg/L	10	-	-	0.633	0.673	0.020
Misc. Inorganics							
Total Organic Carbon (C)	mg/L	-	-	-	0.67	<0.50	0.50
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	<5.0	<5.0	5.0
Nutrients							
Total Ammonia (N)	mg/L	-	-	-	0.011	0.025	0.0050
Total Total Kjeldahl Nitrogen (Calc)	mg/L	-	-	-	<0.020	<0.020	0.020
Nitrate plus Nitrite (N)	mg/L	-	-	-	0.633	0.673	0.020
Total Nitrogen (N)	mg/L	-	-	-	0.620	0.644	0.020
Total Phosphorus (P)	mg/L	-	-	-	0.0146	0.0149	0.0050
Physical Properties							
pH	pH	-	6.5:8.5	-	7.91	7.90	N/A
Physical Properties							
Total Dissolved Solids	mg/L	-	500	-	172	154	10
Turbidity	NTU	see remark	see remark	see remark	<0.10	0.14	0.10
RDL = Reportable Detection Limit N/A = Not Applicable							

Maxxam Job #: B494082
Report Date: 2014/10/27

Town of Qualicum Beach
Sampler Initials: SW

CSR TOTAL METALS IN WATER (WATER)

Maxxam ID					KW9436	KW9437	KW9438	KW9439	
Sampling Date					2014/10/16 07:40	2014/10/16 07:53	2014/10/16 08:15	2014/10/16 08:05	
COC Number					G089278	G089278	G089278	G089278	
	Units	Criteria A	Criteria B	Criteria C	RIVER WELL #1	RIVER WELL #3	RIVER WELL #5	RIVER WELL #6	RDL
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	46.5	46.6	44.4	45.0	0.50
Total Metals by ICPMS									
Total Aluminum (Al)	ug/L	-	-	100	5.1	<3.0	<3.0	<3.0	3.0
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10
Total Barium (Ba)	ug/L	1000	-	-	3.4	4.0	1.2	1.4	1.0
Total Beryllium (Be)	ug/L	-	-	-	<0.10	<0.10	<0.10	<0.10	0.10
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0
Total Boron (B)	ug/L	5000	-	-	<50	<50	<50	<50	50
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	0.045	0.011	<0.010	0.010
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	<1.0	<1.0	1.0
Total Cobalt (Co)	ug/L	-	-	-	<0.50	<0.50	<0.50	<0.50	0.50
Total Copper (Cu)	ug/L	-	1000	-	9.20	19.1	16.5	37.6	0.50
Total Iron (Fe)	ug/L	-	300	-	<10	14	<10	<10	10
Total Lead (Pb)	ug/L	10	-	-	2.33	5.63	6.23	4.23	0.20
Total Lithium (Li)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0
Total Manganese (Mn)	ug/L	-	50	-	<1.0	2.2	<1.0	<1.0	1.0
Total Mercury (Hg)	ug/L	1	-	-	<0.050	<0.050	<0.050	<0.050	0.050
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	<1.0	1.7	1.0
Total Selenium (Se)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10
Total Silicon (Si)	ug/L	-	-	-	4030	4070	5510	4910	100
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	<0.020	0.020
Total Strontium (Sr)	ug/L	-	-	-	34.9	33.4	32.0	32.2	1.0
Total Thallium (Tl)	ug/L	-	-	-	<0.050	<0.050	<0.050	<0.050	0.050
Total Tin (Sn)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0
Total Titanium (Ti)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0
Total Zinc (Zn)	ug/L	-	5000	-	6.4	57.1	26.1	15.2	5.0
Total Zirconium (Zr)	ug/L	-	-	-	<0.50	<0.50	<0.50	<0.50	0.50
Total Calcium (Ca)	mg/L	-	-	-	14.9	14.7	13.8	14.1	0.050
Total Magnesium (Mg)	mg/L	-	-	-	2.26	2.37	2.39	2.36	0.050
Total Potassium (K)	mg/L	-	-	-	0.238	0.122	0.128	0.162	0.050
Total Sodium (Na)	mg/L	-	200	-	3.19	2.27	2.45	2.45	0.050
RDL = Reportable Detection Limit									

Maxxam Job #: B494082
Report Date: 2014/10/27

Town of Qualicum Beach
Sampler Initials: SW

CSR TOTAL METALS IN WATER (WATER)

Maxxam ID					KW9436	KW9437	KW9438	KW9439	
Sampling Date					2014/10/16 07:40	2014/10/16 07:53	2014/10/16 08:15	2014/10/16 08:05	
COC Number					G089278	G089278	G089278	G089278	
	Units	Criteria A	Criteria B	Criteria C	RIVER WELL #1	RIVER WELL #3	RIVER WELL #5	RIVER WELL #6	RDL
Total Sulphur (S)	mg/L	-	-	-	<3.0	<3.0	<3.0	<3.0	3.0
RDL = Reportable Detection Limit									

Maxxam Job #: B494082
Report Date: 2014/10/27

Town of Qualicum Beach
Sampler Initials: SW

CSR TOTAL METALS IN WATER (WATER)

Maxxam ID					KW9440	KW9471	KW9472	KW9473	
Sampling Date					2014/10/16 08:24	2014/10/16 08:56	2014/10/16 08:40	2014/10/16 08:46	
COC Number					G089278	G089281	G089281	G089281	
	Units	Criteria A	Criteria B	Criteria C	RIVER WELL #7	BERWICK WELL #1	BERWICK WELL #2	BERWICK WELL #3	RDL
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	60.7	140	132	113	0.50
Total Metals by ICPMS									
Total Aluminum (Al)	ug/L	-	-	100	<3.0	<3.0	7.6	<3.0	3.0
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50
Total Arsenic (As)	ug/L	10	-	-	<0.10	0.30	0.28	0.28	0.10
Total Barium (Ba)	ug/L	1000	-	-	1.6	4.0	1.8	3.4	1.0
Total Beryllium (Be)	ug/L	-	-	-	<0.10	<0.10	<0.10	<0.10	0.10
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0
Total Boron (B)	ug/L	5000	-	-	<50	<50	<50	<50	50
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	0.014	0.011	<0.010	0.010
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	<1.0	<1.0	1.0
Total Cobalt (Co)	ug/L	-	-	-	<0.50	<0.50	<0.50	<0.50	0.50
Total Copper (Cu)	ug/L	-	1000	-	16.8	0.54	1.66	2.19	0.50
Total Iron (Fe)	ug/L	-	300	-	<10	<10	<10	<10	10
Total Lead (Pb)	ug/L	10	-	-	1.37	<0.20	<0.20	<0.20	0.20
Total Lithium (Li)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0
Total Manganese (Mn)	ug/L	-	50	-	<1.0	<1.0	<1.0	<1.0	1.0
Total Mercury (Hg)	ug/L	1	-	-	<0.050	<0.050	<0.050	<0.050	0.050
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0
Total Nickel (Ni)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0
Total Selenium (Se)	ug/L	10	-	-	<0.10	0.14	0.19	<0.10	0.10
Total Silicon (Si)	ug/L	-	-	-	6890	9660	10500	9560	100
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	<0.020	<0.020	0.020
Total Strontium (Sr)	ug/L	-	-	-	42.5	72.5	49.6	52.5	1.0
Total Thallium (Tl)	ug/L	-	-	-	<0.050	<0.050	<0.050	<0.050	0.050
Total Tin (Sn)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0
Total Titanium (Ti)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0
Total Zinc (Zn)	ug/L	-	5000	-	6.1	<5.0	6.9	8.2	5.0
Total Zirconium (Zr)	ug/L	-	-	-	<0.50	<0.50	<0.50	<0.50	0.50
Total Calcium (Ca)	mg/L	-	-	-	17.8	33.0	27.2	24.7	0.050
Total Magnesium (Mg)	mg/L	-	-	-	3.97	13.9	15.5	12.4	0.050
Total Potassium (K)	mg/L	-	-	-	0.162	0.532	0.497	0.452	0.050
Total Sodium (Na)	mg/L	-	200	-	3.21	6.36	7.41	6.19	0.050
RDL = Reportable Detection Limit									

Maxxam Job #: B494082
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Town of Qualicum Beach
Sampler Initials: SW

CSR TOTAL METALS IN WATER (WATER)

Maxxam ID					KW9440	KW9471	KW9472	KW9473	
Sampling Date					2014/10/16 08:24	2014/10/16 08:56	2014/10/16 08:40	2014/10/16 08:46	
COC Number					G089278	G089281	G089281	G089281	
	Units	Criteria A	Criteria B	Criteria C	RIVER WELL #7	BERWICK WELL #1	BERWICK WELL #2	BERWICK WELL #3	RDL
Total Sulphur (S)	mg/L	-	-	-	4.3	<3.0	<3.0	<3.0	3.0
RDL = Reportable Detection Limit									

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GENERAL COMMENTS

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

Package 1	6.7°C
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Criteria A, Criteria B, Criteria C: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, August 2012.

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.

Maxxam Job #: B494082
Report Date: 2014/10/27

QUALITY ASSURANCE REPORT

Town of Qualicum Beach
Sampler Initials: SW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7683378	pH	2014/10/18			101	97 - 103			1.7	N/A
7683420	Turbidity	2014/10/18			99	80 - 120	<0.10	NTU	NC	20
7683631	pH	2014/10/18			102	97 - 103			0.25	N/A
7683806	True Colour	2014/10/18					<5.0	Col. Unit	NC	20
7683910	Total Phosphorus (P)	2014/10/20	NC	80 - 120	90	80 - 120	<0.0050	mg/L	1.0	20
7683911	Total Phosphorus (P)	2014/10/20	NC	80 - 120	97	80 - 120	<0.0050	mg/L	3.2	20
7683919	Nitrate plus Nitrite (N)	2014/10/18	NC	80 - 120	106	80 - 120	<0.020	mg/L	NC	25
7683920	Nitrite (N)	2014/10/18	NC	80 - 120	101	80 - 120	<0.0050	mg/L	NC	20
7683921	Nitrate plus Nitrite (N)	2014/10/18	103	80 - 120	104	80 - 120	<0.020	mg/L	0	25
7683922	Nitrite (N)	2014/10/18	99	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
7684511	Total Nitrogen (N)	2014/10/20	NC	80 - 120	94	80 - 120	<0.020	mg/L		
7684770	Total Dissolved Solids	2014/10/21	NC	80 - 120	94	80 - 120	<10	mg/L		
7686082	Total Dissolved Solids	2014/10/22	100	80 - 120	84	80 - 120	<10	mg/L	6.9	20
7687151	Total Aluminum (Al)	2014/10/23	104	80 - 120	108	80 - 120	<3.0	ug/L	NC	20
7687151	Total Antimony (Sb)	2014/10/23	100	80 - 120	104	80 - 120	<0.50	ug/L	NC	20
7687151	Total Arsenic (As)	2014/10/23	107	80 - 120	109	80 - 120	<0.10	ug/L	NC	20
7687151	Total Barium (Ba)	2014/10/23	100	80 - 120	103	80 - 120	<1.0	ug/L	NC	20
7687151	Total Beryllium (Be)	2014/10/23	103	80 - 120	103	80 - 120	<0.10	ug/L	NC	20
7687151	Total Bismuth (Bi)	2014/10/23	101	80 - 120	100	80 - 120	<1.0	ug/L	NC	20
7687151	Total Boron (B)	2014/10/23					<50	ug/L	NC	20
7687151	Total Cadmium (Cd)	2014/10/23	101	80 - 120	101	80 - 120	<0.010	ug/L	NC	20
7687151	Total Chromium (Cr)	2014/10/23	102	80 - 120	106	80 - 120	<1.0	ug/L	NC	20
7687151	Total Cobalt (Co)	2014/10/23	101	80 - 120	106	80 - 120	<0.50	ug/L	NC	20
7687151	Total Copper (Cu)	2014/10/23	NC	80 - 120	105	80 - 120	<0.50	ug/L	1.3	20
7687151	Total Iron (Fe)	2014/10/23	100	80 - 120	104	80 - 120	<10	ug/L	NC	20
7687151	Total Lead (Pb)	2014/10/23	99	80 - 120	100	80 - 120	<0.20	ug/L	7.4	20
7687151	Total Lithium (Li)	2014/10/23	96	80 - 120	97	80 - 120	<5.0	ug/L	NC	20
7687151	Total Manganese (Mn)	2014/10/23	105	80 - 120	106	80 - 120	<1.0	ug/L	NC	20
7687151	Total Mercury (Hg)	2014/10/23	105	80 - 120	100	80 - 120	<0.050	ug/L	NC	20
7687151	Total Molybdenum (Mo)	2014/10/23	105	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
7687151	Total Nickel (Ni)	2014/10/23	107	80 - 120	108	80 - 120	<1.0	ug/L	NC	20
7687151	Total Selenium (Se)	2014/10/23	97	80 - 120	101	80 - 120	<0.10	ug/L	NC	20

Maxxam Job #: B494082
Report Date: 2014/10/27

QUALITY ASSURANCE REPORT(CONT'D)

Town of Qualicum Beach
Sampler Initials: SW

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7687151	Total Silicon (Si)	2014/10/23					<100	ug/L	2.1	20
7687151	Total Silver (Ag)	2014/10/23	98	80 - 120	95	80 - 120	<0.020	ug/L	NC	20
7687151	Total Strontium (Sr)	2014/10/23	NC	80 - 120	102	80 - 120	<1.0	ug/L	1.5	20
7687151	Total Thallium (Tl)	2014/10/23	101	80 - 120	101	80 - 120	<0.050	ug/L	NC	20
7687151	Total Tin (Sn)	2014/10/23	99	80 - 120	100	80 - 120	<5.0	ug/L	NC	20
7687151	Total Titanium (Ti)	2014/10/23	103	80 - 120	102	80 - 120	<5.0	ug/L	NC	20
7687151	Total Uranium (U)	2014/10/23	104	80 - 120	102	80 - 120	<0.10	ug/L	NC	20
7687151	Total Vanadium (V)	2014/10/23	103	80 - 120	102	80 - 120	<5.0	ug/L	NC	20
7687151	Total Zinc (Zn)	2014/10/23	NC	80 - 120	106	80 - 120	<5.0	ug/L	NC	20
7687151	Total Zirconium (Zr)	2014/10/23					<0.50	ug/L	NC	20
7687391	Total Ammonia (N)	2014/10/21	NC	80 - 120	92	80 - 120	<0.0050	mg/L	1.5	20
7687392	Total Ammonia (N)	2014/10/21	NC	80 - 120	106	80 - 120	0.0051 ,RDL=0.0050	mg/L	1.5	20
7688364	Total Organic Carbon (C)	2014/10/22			104	80 - 120	<0.50	mg/L		
7688374	Total Organic Carbon (C)	2014/10/22	96	80 - 120	104	80 - 120	<0.50	mg/L		
7692554	Total Ammonia (N)	2014/10/24			103	80 - 120	0.0058 ,RDL=0.0050	mg/L		
7695479	Total Nitrogen (N)	2014/10/27			96	80 - 120	<0.020	mg/L		

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).

Maxxam Job #: B494082
Report Date: 2014/10/27

Town of Qualicum Beach
Sampler Initials: SW

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 Job#: B494082

Invoice To: Require Report? Yes No

Company Name: _____
 Contact Name: _____
 Address: _____
 PC: _____
 Phone / Fax#: Ph: _____ Fax: _____
 E-mail: _____

Report To:
 Company Name: Town of QUANICOM BEACH
 Contact Name: BOB WEIR
 Address: #201 - 660 PRIMROSE ST
P.O. BOX 130 PC: V9K 1S7
 Ph: 2507526921 Fax: 2507521243
 E-mail: BOBWEIR@QUANICOMBACH.COM

PO #: _____
 Quotation #: _____
 Project #: _____
 Proj. Name: _____
 Location: _____
 Sampled By: SHOOD

REGULATORY REQUIREMENTS SERVICE REQUESTED:
 CSR Regular Turn Around Time (TAT)
 CCME (5 days for most tests)
 BC Water Quality RUSH (Please contact the lab)
 Other 1 Day 2 Day 3 Day
 DRINKING WATER Date Required: _____

Special Instructions:
 Return Cooler Ship Sample Bottles (please specify)

*** ALL SAMPLES ARE RAW WATER**

ANALYSIS REQUESTED																															
MTBE	TEH	LEP/NEPH	CCME-PHC (Fractions 1-4 Plus BTEX)	CCME-PHC (Fractions 2-4)	CCME BTEX (Fraction 1 Plus BTEX)	PCB	Phenols by A/AP	Phenols by GC/MS	SWDG	Disolved Metals	Total Metals Field Analysis?	Nitrate	Nitrite	Ammonia	Chloride	Fluoride	Sulphate	Total Suspended Solids-TSS	TDS	pH	Conductivity	Alkalinity	BOD	COD	Coliform, Total & E.coli	Fecal	Asbestos	TOTAL IRON	HARDNESS	HOLD	

Sample Identification	Lab Identification	Sample Type	Date/Time Sampled
1 RIVERWELL #1		H2O	14/10/16 7:42
2 " #3		"	14/10/16 7:56 AM
3 " #5		"	14/10/16 8:17
4 " #6		"	14/10/16 8:07
5 " #7		"	14/10/16 8:26
6 RIVERWELL #1		"	14/10/16 7:43
7 " #3		"	14/10/16 7:55 AM
8 " #5		"	14/10/16 8:18
9 " #6		"	14/10/16 8:08 AM
10 " #7		"	14/10/16 8:27
11			
12			

120ml HNO3
 120ml



B494082

YES NO YES NO
 Samples are from a Drinking Water Source? YES NO
 Does source supply multiple households? YES NO

Relinquished by: SHOOD Date (YY/MM/DD): 17/10/16 Time: _____
 Received by: Michelle Lauerbach Date (YY/MM/DD): 20/10/17 Time: 09:40
 Time Sensitive: Temperature on Receipt (°C): 6, 6, 8 Custody Seal Intact on Cooler? NA
 Yes 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. White: Maxxam Yellow: Client



CHAIN OF CUSTODY RECORD

Page: 1 of 3

Maxxam Job#: B49A082

G 089278

Invoice To: Require Report? Yes No

Report To:

Company Name:
Contact Name:
Address:
Phone / Fax#:
E-mail:

Company Name: TOWN OF QUALICUM BEACH
Contact Name: BOB WEIR
Address: #201-660 PRIMROSE ST
Phone / Fax#: Ph: 250 752 6921 Fax: 250 752 1243
E-mail: BOBWEIR@QUALICUMBEACH.COM

PO #:
Quotation #:
Project #:
Proj. Name:
Location:
Sampled By: J Wood

REGULATORY REQUIREMENTS SERVICE REQUESTED:

CSR
CCME
BC Water Quality
Other
DRINKING WATER
Regular Turn Around Time (TAT)
RUSH (Please contact the lab)
Date Required:

Special Instructions:

Return Cooler
Ship Sample Bottles (please specify)

* ALL SAMPLES ARE RAW WATER

ANALYSIS REQUESTED

Table with columns: Sample Identification, Lab Identification, Sample Type, Date/Time Sampled, and various analysis parameters (BTEX, PCB, Metals, etc.). Includes handwritten notes like '1 LITRE' and '120ml H2SO4'.

Relinquished by: J Wood, Date: 14/10/16, Received by: M. Laurence, Date: 20/11/17, Time: 09:40, Temperature on Receipt: 6.6, 8

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.