

Your C.O.C. #: WI009337

Attention: Donna Michiel

Mill Bay Water District
PO Box 58
875 Deloume Road
Mill Bay, BC
Canada V0R 2P0

Report Date: 2017/03/21

Report #: R2359896

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B717036

Received: 2017/03/08, 12:13

Sample Matrix: DRINKING WATER
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Water (1)	4	2017/03/13	2017/03/14	BBY6SOP-00026	SM2320B
Chloride by Automated Colourimetry	4	N/A	2017/03/10	BBY6SOP-00011	SM 22 4500-Cl- E m
True Colour (Single Wavelength) (1)	4	N/A	2017/03/10	VIC SOP-00010	Based on SM-2120 C
Conductance - water (1)	4	N/A	2017/03/14	BBY6SOP-00026	SM-2510B
Fluoride	4	N/A	2017/03/10	BBY6SOP-00048	SM 22 4500-F C m
Iron Bacteria (1)	4	N/A	2017/03/08	VIC SOP-00114	SM 22 9240 m
Sulphide (as H ₂ S) Calculation - total	4	N/A	2017/03/14	BBY6SOP-00006	SM 22 4500-S2-D m
Hardness Total (calculated as CaCO ₃)	4	N/A	2017/03/14	BBY WI-00033	Auto Calc
Mercury (Total) by CVAF	4	2017/03/10	2017/03/10	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Heterotrophic Plate Count Water Mem. Filt (1)	4	N/A	2017/03/08	BBY4 SOP-00003	Based on SM-9215
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2017/03/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by CRC ICPMS (total)	4	N/A	2017/03/13	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Nitrogen (Total)	4	2017/03/13	2017/03/13	BBY6SOP-00016	SM 22 4500-N C m
Ammonia-N (Preserved)	4	N/A	2017/03/10	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate + Nitrite (N)	4	N/A	2017/03/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) by CFA	4	N/A	2017/03/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	4	N/A	2017/03/11	BBY6SOP-00010	SM 22 4500-NO3 I m
Nitrogen (Organic) (Cal. TKN, NH ₄ ,N/N)	4	N/A	2017/03/13	BBY WI-00033	Auto Calc
pH Water (1, 2)	4	N/A	2017/03/14	BBY6SOP-00026	SM-4500H+B
Sat. pH and Langelier Index (@ 4.4C)	4	N/A	2017/03/15	BBY WI-00033	Auto Calc
Sat. pH and Langelier Index (@ 60C)	4	N/A	2017/03/15	BBY WI-00033	Auto Calc
Sulphate by Automated Colourimetry	4	N/A	2017/03/10	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate Reducing Bacteria (1)	4	N/A	2017/03/08	VIC SOP-00114	SM 22 9240 m
Sulphide - total	4	N/A	2017/03/13	BBY6SOP-00006	SM 22 4500-S2- D m
Total Dissolved Solids (Filt. Residue) (1)	4	N/A	2017/03/16	VIC SOP-00008	Based on SM 2540C
Total Coliform & E.Coli by MF-Chromocult (1)	4	N/A	2017/03/09	VIC SOP 00112	Based on SM-9222
Carbon (Total Organic) (3)	4	N/A	2017/03/13	BBY6SOP-00003	SM 22 5310 C m
Turbidity (1)	4	N/A	2017/03/10	VIC SOP-00011	SM 22 2130B m

Remarks:

Your C.O.C. #: WI009337

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CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B717036

Received: 2017/03/08, 12:13

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) 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.

(3) 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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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 #: B717036
Report Date: 2017/03/21

Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					QR3615		
Sampling Date					2017/03/08 09:30		
COC Number					WI009337		
	UNITS	MAC	AO	OG	1-WS-10 DISTRIBUTION	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	-	-	-	111	0.50	8571582
Misc. Inorganics							
Alkalinity (Total as CaCO3)	mg/L	-	-	-	97.9	0.5	8576113
Total Organic Carbon (C)	mg/L	-	-	-	1.33	0.50	8575785
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<0.5	0.5	8576113
Bicarbonate (HCO3)	mg/L	-	-	-	119	0.5	8576113
Carbonate (CO3)	mg/L	-	-	-	<0.5	0.5	8576113
Hydroxide (OH)	mg/L	-	-	-	<0.5	0.5	8576113
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	<5	5	8574556
Nutrients							
Total Organic Nitrogen (N)	mg/L	-	-	-	0.26	0.10	8572524
Total Ammonia (N)	mg/L	-	-	-	0.41	0.0050	8574044
Total Nitrogen (N)	mg/L	-	-	-	2.48 (1)	0.10	8576139
Physical Properties							
Conductivity	uS/cm	-	-	-	253	1	8576123
pH	pH	-	7.0:10.5	-	7.5		8576122
Physical Properties							
Total Dissolved Solids	mg/L	-	500	-	161	10	8577702
Turbidity	NTU	see remark	see remark	see remark	0.4	0.1	8575851
Elements							
Total Mercury (Hg)	ug/L	1	-	-	<0.010	0.010	8574218
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	-	-	100	3.1	3.0	8576004
Total Antimony (Sb)	ug/L	6	-	-	<0.50	0.50	8576004
Total Arsenic (As)	ug/L	10	-	-	0.24	0.10	8576004
Total Barium (Ba)	ug/L	1000	-	-	8.3	1.0	8576004
Total Beryllium (Be)	ug/L	-	-	-	<0.10	0.10	8576004
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	1.0	8576004
Total Boron (B)	ug/L	5000	-	-	<50	50	8576004
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	0.010	8576004
Total Chromium (Cr)	ug/L	50	-	-	<1.0	1.0	8576004
Total Cobalt (Co)	ug/L	-	-	-	<0.20	0.20	8576004
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.							

Maxxam Job #: B717036
Report Date: 2017/03/21

Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					QR3615		
Sampling Date					2017/03/08 09:30		
COC Number					WI009337		
	UNITS	MAC	AO	OG	1-WS-10 DISTRIBUTION	RDL	QC Batch
Total Copper (Cu)	ug/L	-	1000	-	98.8	0.20	8576004
Total Iron (Fe)	ug/L	-	300	-	60.1	5.0	8576004
Total Lead (Pb)	ug/L	10	-	-	1.78	0.20	8576004
Total Manganese (Mn)	ug/L	-	50	-	11.3	1.0	8576004
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	1.0	8576004
Total Nickel (Ni)	ug/L	-	-	-	<1.0	1.0	8576004
Total Selenium (Se)	ug/L	50	-	-	<0.10	0.10	8576004
Total Silicon (Si)	ug/L	-	-	-	14500	100	8576004
Total Silver (Ag)	ug/L	-	-	-	<0.020	0.020	8576004
Total Strontium (Sr)	ug/L	-	-	-	114	1.0	8576004
Total Thallium (Tl)	ug/L	-	-	-	<0.010	0.010	8576004
Total Tin (Sn)	ug/L	-	-	-	<5.0	5.0	8576004
Total Titanium (Ti)	ug/L	-	-	-	<5.0	5.0	8576004
Total Uranium (U)	ug/L	20	-	-	<0.10	0.10	8576004
Total Vanadium (V)	ug/L	-	-	-	<5.0	5.0	8576004
Total Zinc (Zn)	ug/L	-	5000	-	31.3	5.0	8576004
Total Zirconium (Zr)	ug/L	-	-	-	<0.50	0.50	8576004
Total Calcium (Ca)	mg/L	-	-	-	30.0	0.050	8571871
Total Magnesium (Mg)	mg/L	-	-	-	8.68	0.050	8571871
Total Potassium (K)	mg/L	-	-	-	0.894	0.050	8571871
Total Sodium (Na)	mg/L	-	200	-	9.64	0.050	8571871
Total Sulphur (S)	mg/L	-	-	-	<3.0	3.0	8571871
Microbiological Param.							
Heterotrophic Plate Count	CFU/mL	-	-	-	3	1	8575729
Iron Bacteria	CFU/mL	-	-	-	<25	25	8583780
Sulphate reducing bacteria	CFU/mL	-	-	-	<75	75	8583786
Total Coliforms	CFU/100mL	<1	-	-	<1	1	8575897
E. coli	CFU/100mL	<1	-	-	<1	1	8575897
Parameter							
Langelier Index (@ 4.4C)	N/A	-	-	-	-0.912	N/A	8577216
Langelier Index (@ 60C)	N/A	-	-	-	0.129	N/A	8577217
Saturation pH (@ 4.4C)	N/A	-	-	-	8.45	N/A	8577216
Saturation pH (@ 60C)	N/A	-	-	-	7.41	N/A	8577217
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
N/A = Not Applicable							

Maxxam Job #: B717036
Report Date: 2017/03/21

Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					QR3615		
Sampling Date					2017/03/08 09:30		
COC Number					WI009337		
	UNITS	MAC	AO	OG	1-WS-10 DISTRIBUTION	RDL	QC Batch
MISCELLANEOUS							
Total Sulphide	mg/L	-	0.05	-	<0.0050	0.0050	8575318
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					QR3616		QR3617		
Sampling Date					2017/03/08 08:45		2017/03/08 09:00		
COC Number					WI009337		WI009337		
	UNITS	MAC	AO	OG	WELL 1387	RDL	WELL 783	RDL	QC Batch
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	127	0.50	139	0.50	8571582
Misc. Inorganics									
Alkalinity (Total as CaCO3)	mg/L	-	-	-	131	0.5	117	0.5	8576128
Total Organic Carbon (C)	mg/L	-	-	-	0.53	0.50	<0.50	0.50	8575785
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<0.5	0.5	<0.5	0.5	8576128
Bicarbonate (HCO3)	mg/L	-	-	-	159	0.5	143	0.5	8576128
Carbonate (CO3)	mg/L	-	-	-	<0.5	0.5	<0.5	0.5	8576128
Hydroxide (OH)	mg/L	-	-	-	<0.5	0.5	<0.5	0.5	8576128
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5	5	<5	5	8574556
Nutrients									
Total Organic Nitrogen (N)	mg/L	-	-	-	0.048	0.020	0.20	0.10	8572524
Total Ammonia (N)	mg/L	-	-	-	0.090	0.0050	0.046	0.0050	8574044
Total Nitrogen (N)	mg/L	-	-	-	0.163	0.020	2.94 (1)	0.10	8576139
Physical Properties									
Conductivity	uS/cm	-	-	-	340	1	299	1	8576131
pH	pH	-	7.0:10.5	-	8.0		7.5		8576130
Physical Properties									
Total Dissolved Solids	mg/L	-	500	-	182	10	182	10	8577702
Turbidity	NTU	see remark	see remark	see remark	<0.1	0.1	0.3	0.1	8575851
Elements									
Total Mercury (Hg)	ug/L	1	-	-	<0.010	0.010	<0.010	0.010	8574218
Total Metals by ICPMS									
Total Aluminum (Al)	ug/L	-	-	100	5.9	3.0	<3.0	3.0	8576004
Total Antimony (Sb)	ug/L	6	-	-	<0.50	0.50	<0.50	0.50	8576004
Total Arsenic (As)	ug/L	10	-	-	0.71	0.10	<0.10	0.10	8576004
Total Barium (Ba)	ug/L	1000	-	-	14.7	1.0	9.2	1.0	8576004
Total Beryllium (Be)	ug/L	-	-	-	<0.10	0.10	<0.10	0.10	8576004
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	1.0	<1.0	1.0	8576004
Total Boron (B)	ug/L	5000	-	-	61	50	<50	50	8576004
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	0.010	<0.010	0.010	8576004
Total Chromium (Cr)	ug/L	50	-	-	<1.0	1.0	<1.0	1.0	8576004
Total Cobalt (Co)	ug/L	-	-	-	<0.20	0.20	<0.20	0.20	8576004
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.									

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					QR3616		QR3617		
Sampling Date					2017/03/08 08:45		2017/03/08 09:00		
COC Number					WI009337		WI009337		
	UNITS	MAC	AO	OG	WELL 1387	RDL	WELL 783	RDL	QC Batch
Total Copper (Cu)	ug/L	-	1000	-	1.08	0.20	1.41	0.20	8576004
Total Iron (Fe)	ug/L	-	300	-	25.1	5.0	<5.0	5.0	8576004
Total Lead (Pb)	ug/L	10	-	-	<0.20	0.20	0.30	0.20	8576004
Total Manganese (Mn)	ug/L	-	50	-	54.9	1.0	<1.0	1.0	8576004
Total Molybdenum (Mo)	ug/L	-	-	-	2.7	1.0	<1.0	1.0	8576004
Total Nickel (Ni)	ug/L	-	-	-	<1.0	1.0	<1.0	1.0	8576004
Total Selenium (Se)	ug/L	50	-	-	<0.10	0.10	<0.10	0.10	8576004
Total Silicon (Si)	ug/L	-	-	-	8410	100	13300	100	8576004
Total Silver (Ag)	ug/L	-	-	-	<0.020	0.020	<0.020	0.020	8576004
Total Strontium (Sr)	ug/L	-	-	-	393	1.0	109	1.0	8576004
Total Thallium (Tl)	ug/L	-	-	-	<0.010	0.010	<0.010	0.010	8576004
Total Tin (Sn)	ug/L	-	-	-	<5.0	5.0	<5.0	5.0	8576004
Total Titanium (Ti)	ug/L	-	-	-	<5.0	5.0	<5.0	5.0	8576004
Total Uranium (U)	ug/L	20	-	-	1.78	0.10	<0.10	0.10	8576004
Total Vanadium (V)	ug/L	-	-	-	<5.0	5.0	<5.0	5.0	8576004
Total Zinc (Zn)	ug/L	-	5000	-	<5.0	5.0	<5.0	5.0	8576004
Total Zirconium (Zr)	ug/L	-	-	-	<0.50	0.50	<0.50	0.50	8576004
Total Calcium (Ca)	mg/L	-	-	-	37.4	0.050	34.3	0.050	8571871
Total Magnesium (Mg)	mg/L	-	-	-	8.11	0.050	12.8	0.050	8571871
Total Potassium (K)	mg/L	-	-	-	0.416	0.050	0.647	0.050	8571871
Total Sodium (Na)	mg/L	-	200	-	21.6	0.050	6.88	0.050	8571871
Total Sulphur (S)	mg/L	-	-	-	9.1	3.0	3.0	3.0	8571871
Microbiological Param.									
Heterotrophic Plate Count	CFU/mL	-	-	-	4	1	1	1	8575729
Iron Bacteria	CFU/mL	-	-	-	35000	25	<25	25	8583780
Sulphate reducing bacteria	CFU/mL	-	-	-	1400	75	<75	75	8583786
Total Coliforms	CFU/100mL	<1	-	-	<1	1	1	1	8575897
E. coli	CFU/100mL	<1	-	-	<1	1	<1	1	8575897
Parameter									
Langelier Index (@ 4.4C)	N/A	-	-	-	-0.197	N/A	-0.860	N/A	8577216
Langelier Index (@ 60C)	N/A	-	-	-	0.844	N/A	0.181	N/A	8577217
Saturation pH (@ 4.4C)	N/A	-	-	-	8.24	N/A	8.32	N/A	8577216
Saturation pH (@ 60C)	N/A	-	-	-	7.20	N/A	7.28	N/A	8577217
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
N/A = Not Applicable									

Maxxam Job #: B717036
Report Date: 2017/03/21

Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					QR3616		QR3617		
Sampling Date					2017/03/08 08:45		2017/03/08 09:00		
COC Number					WI009337		WI009337		
	UNITS	MAC	AO	OG	WELL 1387	RDL	WELL 783	RDL	QC Batch

MISCELLANEOUS									
Total Sulphide	mg/L	-	0.05	-	0.0092	0.0050	<0.0050	0.0050	8575318
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									

Maxxam Job #: B717036
Report Date: 2017/03/21

Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					QR3618		
Sampling Date					2017/03/08 10:30		
COC Number					WI009337		
	UNITS	MAC	AO	OG	WELL 779	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	-	-	-	38.6	0.50	8571582
Misc. Inorganics							
Alkalinity (Total as CaCO3)	mg/L	-	-	-	37.1	0.5	8576128
Total Organic Carbon (C)	mg/L	-	-	-	0.74	0.50	8575785
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<0.5	0.5	8576128
Bicarbonate (HCO3)	mg/L	-	-	-	45.3	0.5	8576128
Carbonate (CO3)	mg/L	-	-	-	<0.5	0.5	8576128
Hydroxide (OH)	mg/L	-	-	-	<0.5	0.5	8576128
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	<5	5	8574556
Nutrients							
Total Organic Nitrogen (N)	mg/L	-	-	-	0.034	0.020	8572524
Total Ammonia (N)	mg/L	-	-	-	0.051	0.0050	8574044
Total Nitrogen (N)	mg/L	-	-	-	0.368	0.020	8576139
Physical Properties							
Conductivity	uS/cm	-	-	-	94	1	8576131
pH	pH	-	7.0:10.5	-	7.3		8576130
Physical Properties							
Total Dissolved Solids	mg/L	-	500	-	60	10	8577702
Turbidity	NTU	see remark	see remark	see remark	0.2	0.1	8575851
Elements							
Total Mercury (Hg)	ug/L	1	-	-	<0.010	0.010	8574218
Total Metals by ICPMS							
Total Aluminum (Al)	ug/L	-	-	100	<3.0	3.0	8576004
Total Antimony (Sb)	ug/L	6	-	-	<0.50	0.50	8576004
Total Arsenic (As)	ug/L	10	-	-	<0.10	0.10	8576004
Total Barium (Ba)	ug/L	1000	-	-	1.2	1.0	8576004
Total Beryllium (Be)	ug/L	-	-	-	<0.10	0.10	8576004
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	1.0	8576004
Total Boron (B)	ug/L	5000	-	-	<50	50	8576004
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	0.010	8576004
Total Chromium (Cr)	ug/L	50	-	-	<1.0	1.0	8576004
Total Cobalt (Co)	ug/L	-	-	-	<0.20	0.20	8576004
Total Copper (Cu)	ug/L	-	1000	-	0.73	0.20	8576004
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							

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Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					QR3618		
Sampling Date					2017/03/08 10:30		
COC Number					WI009337		
	UNITS	MAC	AO	OG	WELL 779	RDL	QC Batch
Total Iron (Fe)	ug/L	-	300	-	17.9	5.0	8576004
Total Lead (Pb)	ug/L	10	-	-	<0.20	0.20	8576004
Total Manganese (Mn)	ug/L	-	50	-	<1.0	1.0	8576004
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	1.0	8576004
Total Nickel (Ni)	ug/L	-	-	-	<1.0	1.0	8576004
Total Selenium (Se)	ug/L	50	-	-	<0.10	0.10	8576004
Total Silicon (Si)	ug/L	-	-	-	9840	100	8576004
Total Silver (Ag)	ug/L	-	-	-	<0.020	0.020	8576004
Total Strontium (Sr)	ug/L	-	-	-	32.7	1.0	8576004
Total Thallium (Tl)	ug/L	-	-	-	<0.010	0.010	8576004
Total Tin (Sn)	ug/L	-	-	-	<5.0	5.0	8576004
Total Titanium (Ti)	ug/L	-	-	-	<5.0	5.0	8576004
Total Uranium (U)	ug/L	20	-	-	<0.10	0.10	8576004
Total Vanadium (V)	ug/L	-	-	-	<5.0	5.0	8576004
Total Zinc (Zn)	ug/L	-	5000	-	<5.0	5.0	8576004
Total Zirconium (Zr)	ug/L	-	-	-	<0.50	0.50	8576004
Total Calcium (Ca)	mg/L	-	-	-	10.5	0.050	8571871
Total Magnesium (Mg)	mg/L	-	-	-	3.03	0.050	8571871
Total Potassium (K)	mg/L	-	-	-	0.282	0.050	8571871
Total Sodium (Na)	mg/L	-	200	-	3.70	0.050	8571871
Total Sulphur (S)	mg/L	-	-	-	<3.0	3.0	8571871
Microbiological Param.							
Heterotrophic Plate Count	CFU/mL	-	-	-	<1	1	8575729
Iron Bacteria	CFU/mL	-	-	-	500	25	8583780
Sulphate reducing bacteria	CFU/mL	-	-	-	<75	75	8583786
Total Coliforms	CFU/100mL	<1	-	-	<1	1	8575897
E. coli	CFU/100mL	<1	-	-	<1	1	8575897
Parameter							
Langelier Index (@ 4.4C)	N/A	-	-	-	-1.96	N/A	8577216
Langelier Index (@ 60C)	N/A	-	-	-	-0.916	N/A	8577217
Saturation pH (@ 4.4C)	N/A	-	-	-	9.29	N/A	8577216
Saturation pH (@ 60C)	N/A	-	-	-	8.25	N/A	8577217
MISCELLANEOUS							
Total Sulphide	mg/L	-	0.05	-	0.0124	0.0050	8575318
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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Mill Bay Water District

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Maxxam ID				QR3615	QR3616			QR3617		
Sampling Date				2017/03/08 09:30	2017/03/08 08:45			2017/03/08 09:00		
COC Number				WI009337	WI009337			WI009337		
	UNITS	MAC	AO	1-WS-10 DISTRIBUTION	WELL 1387	RDL	QC Batch	WELL 783	RDL	QC Batch
ANIONS										
Nitrite (N)	mg/L	1	-	<0.0050	<0.0050	0.0050	8575042	<0.0050	0.0050	8575040
Calculated Parameters										
Nitrate (N)	mg/L	10	-	1.82	0.025	0.020	8571812	2.69	0.10	8571812
Misc. Inorganics										
Fluoride (F)	mg/L	1.5	-	0.058	0.080	0.010	8574663	0.037	0.010	8574661
Anions										
Dissolved Sulphate (SO4)	mg/L	-	500	5.99	25.0	0.50	8574689	9.62	0.50	8574684
Dissolved Chloride (Cl)	mg/L	-	250	11	11	0.50	8574685	9.6	0.50	8574682
Nutrients										
Nitrate plus Nitrite (N)	mg/L	-	-	1.82	0.025	0.020	8575041	2.69 (1)	0.10	8575039
No Fill	No Exceedance									
Grey	Exceeds 1 criteria policy/level									
Black	Exceeds both criteria/levels									
RDL = Reportable Detection Limit										
(1) Detection limits raised due to dilution to bring analyte within the calibrated range.										

Maxxam ID				QR3618		
Sampling Date				2017/03/08 10:30		
COC Number				WI009337		
	UNITS	MAC	AO	WELL 779	RDL	QC Batch
ANIONS						
Nitrite (N)	mg/L	1	-	<0.0050	0.0050	8575042
Calculated Parameters						
Nitrate (N)	mg/L	10	-	0.282	0.020	8571812
Misc. Inorganics						
Fluoride (F)	mg/L	1.5	-	0.039	0.010	8574663
Anions						
Dissolved Sulphate (SO4)	mg/L	-	500	4.94	0.50	8574689
Dissolved Chloride (Cl)	mg/L	-	250	2.7	0.50	8574685
Nutrients						
Nitrate plus Nitrite (N)	mg/L	-	-	0.282	0.020	8575041
No Fill	No Exceedance					
Grey	Exceeds 1 criteria policy/level					
Black	Exceeds both criteria/levels					
RDL = Reportable Detection Limit						

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Mill Bay Water District

MISCELLANEOUS (DRINKING WATER)

Maxxam ID			QR3615	QR3616	QR3617	QR3618		
Sampling Date			2017/03/08 09:30	2017/03/08 08:45	2017/03/08 09:00	2017/03/08 10:30		
COC Number			WI009337	WI009337	WI009337	WI009337		
	UNITS	AO	1-WS-10 DISTRIBUTION	WELL 1387	WELL 783	WELL 779	RDL	QC Batch
MISCELLANEOUS								
Total Sulphide (as H2S)	mg/L	0.05	<0.0053	0.010	<0.0053	0.013	0.0053	8572410
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								

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Mill Bay Water District

GENERAL COMMENTS

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

Package 1	7.0°C
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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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QUALITY ASSURANCE REPORT

Mill Bay Water District

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8574044	Total Ammonia (N)	2017/03/10	106	80 - 120	100	80 - 120	<0.0050	mg/L	0.29	20
8574218	Total Mercury (Hg)	2017/03/10	101	80 - 120	107	80 - 120	<0.010	ug/L	NC	20
8574556	True Colour	2017/03/10			97	80 - 120	<5	Col. Unit	NC	10
8574661	Fluoride (F)	2017/03/10	104	80 - 120	104	80 - 120	0.018, RDL=0.010	mg/L	NC	20
8574663	Fluoride (F)	2017/03/10	100	80 - 120	104	80 - 120	0.014, RDL=0.010	mg/L	1.6	20
8574682	Dissolved Chloride (Cl)	2017/03/10	111	80 - 120	105	80 - 120	<0.50	mg/L	1.1	20
8574684	Dissolved Sulphate (SO4)	2017/03/10	113	80 - 120	102	80 - 120	<0.50	mg/L	0.70	20
8574685	Dissolved Chloride (Cl)	2017/03/10	110	80 - 120	99	80 - 120	<0.50	mg/L	0.29	20
8574689	Dissolved Sulphate (SO4)	2017/03/10	112	80 - 120	98	80 - 120	<0.50	mg/L	0.75	20
8575039	Nitrate plus Nitrite (N)	2017/03/10	101	80 - 120	112	80 - 120	<0.020	mg/L	0.54	25
8575040	Nitrite (N)	2017/03/10	99	80 - 120	110	80 - 120	<0.0050	mg/L	0.73	20
8575041	Nitrate plus Nitrite (N)	2017/03/10	101	80 - 120	108	80 - 120	<0.020	mg/L	0.42	25
8575042	Nitrite (N)	2017/03/10	100	80 - 120	110	80 - 120	<0.0050	mg/L	4.7	20
8575318	Total Sulphide	2017/03/13	83	80 - 120	98	80 - 120	<0.0050	mg/L	14	20
8575729	Heterotrophic Plate Count	2017/03/08							NC	N/A
8575785	Total Organic Carbon (C)	2017/03/13	NC	80 - 120	112	80 - 120	<0.50	mg/L	3.4	20
8575851	Turbidity	2017/03/10			100	80 - 120	<0.1	NTU	9.5	20
8575897	E. coli	2017/03/09							NC	N/A
8575897	Total Coliforms	2017/03/09							NC	N/A
8576004	Total Aluminum (Al)	2017/03/13	111	80 - 120	115	80 - 120	<3.0	ug/L	NC	20
8576004	Total Antimony (Sb)	2017/03/13	103	80 - 120	102	80 - 120	<0.50	ug/L	NC	20
8576004	Total Arsenic (As)	2017/03/13	103	80 - 120	102	80 - 120	<0.10	ug/L	6.2	20
8576004	Total Barium (Ba)	2017/03/13	106	80 - 120	101	80 - 120	<1.0	ug/L	1.5	20
8576004	Total Beryllium (Be)	2017/03/13	104	80 - 120	102	80 - 120	<0.10	ug/L	NC	20
8576004	Total Bismuth (Bi)	2017/03/13	99	80 - 120	100	80 - 120	<1.0	ug/L	NC	20
8576004	Total Boron (B)	2017/03/13	93	80 - 120	99	80 - 120	<50	ug/L	NC	20
8576004	Total Cadmium (Cd)	2017/03/13	104	80 - 120	101	80 - 120	<0.010	ug/L	NC	20
8576004	Total Chromium (Cr)	2017/03/13	98	80 - 120	103	80 - 120	<1.0	ug/L	NC	20
8576004	Total Cobalt (Co)	2017/03/13	97	80 - 120	103	80 - 120	<0.20	ug/L	NC	20
8576004	Total Copper (Cu)	2017/03/13	NC	80 - 120	102	80 - 120	<0.20	ug/L	1.2	20
8576004	Total Iron (Fe)	2017/03/13	108	80 - 120	117	80 - 120	<5.0	ug/L	0.86	20

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QUALITY ASSURANCE REPORT(CONT'D)

Mill Bay Water District

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8576004	Total Lead (Pb)	2017/03/13	99	80 - 120	99	80 - 120	<0.20	ug/L	4.4	20
8576004	Total Manganese (Mn)	2017/03/13	NC	80 - 120	104	80 - 120	<1.0	ug/L	2.1	20
8576004	Total Molybdenum (Mo)	2017/03/13	110	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
8576004	Total Nickel (Ni)	2017/03/13	95	80 - 120	103	80 - 120	<1.0	ug/L	NC	20
8576004	Total Selenium (Se)	2017/03/13	106	80 - 120	105	80 - 120	<0.10	ug/L	NC	20
8576004	Total Silicon (Si)	2017/03/13					<100	ug/L	0.84	20
8576004	Total Silver (Ag)	2017/03/13	108	80 - 120	104	80 - 120	<0.020	ug/L	NC	20
8576004	Total Strontium (Sr)	2017/03/13	NC	80 - 120	99	80 - 120	<1.0	ug/L	1.9	20
8576004	Total Thallium (Tl)	2017/03/13	101	80 - 120	100	80 - 120	<0.010	ug/L	NC	20
8576004	Total Tin (Sn)	2017/03/13	106	80 - 120	103	80 - 120	<5.0	ug/L	NC	20
8576004	Total Titanium (Ti)	2017/03/13	105	80 - 120	102	80 - 120	<5.0	ug/L	NC	20
8576004	Total Uranium (U)	2017/03/13	98	80 - 120	95	80 - 120	<0.10	ug/L	NC	20
8576004	Total Vanadium (V)	2017/03/13	101	80 - 120	105	80 - 120	<5.0	ug/L	NC	20
8576004	Total Zinc (Zn)	2017/03/13	NC	80 - 120	107	80 - 120	<5.0	ug/L	2.1	20
8576004	Total Zirconium (Zr)	2017/03/13					<0.50	ug/L	NC	20
8576113	Alkalinity (PP as CaCO3)	2017/03/14					<0.5	mg/L	NC	20
8576113	Alkalinity (Total as CaCO3)	2017/03/14	90	80 - 120	94	80 - 120	<0.5	mg/L	1.2	20
8576113	Bicarbonate (HCO3)	2017/03/14					<0.5	mg/L	1.2	20
8576113	Carbonate (CO3)	2017/03/14					<0.5	mg/L	NC	20
8576113	Hydroxide (OH)	2017/03/14					<0.5	mg/L	NC	20
8576122	pH	2017/03/14			101	96 - 104			0.27	N/A
8576123	Conductivity	2017/03/14			103	90 - 110	<1	uS/cm		
8576128	Alkalinity (PP as CaCO3)	2017/03/14					<0.5	mg/L	NC	20
8576128	Alkalinity (Total as CaCO3)	2017/03/14	93	80 - 120	92	80 - 120	<0.5	mg/L	1.4	20
8576128	Bicarbonate (HCO3)	2017/03/14					<0.5	mg/L	1.4	20
8576128	Carbonate (CO3)	2017/03/14					<0.5	mg/L	NC	20
8576128	Hydroxide (OH)	2017/03/14					<0.5	mg/L	NC	20
8576130	pH	2017/03/14			101	96 - 104			0.81	N/A
8576131	Conductivity	2017/03/14			103	90 - 110	1,RDL=1	uS/cm		
8576139	Total Nitrogen (N)	2017/03/13	NC	80 - 120	102	80 - 120	<0.020	mg/L	1.6	20
8577702	Total Dissolved Solids	2017/03/16			102	80 - 120	<10	mg/L	0.62	20

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QUALITY ASSURANCE REPORT(CONT'D)

Mill Bay Water District

QC Batch	Parameter	Date	Matrix Spike		Spiked Blank		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8583786	Sulphate reducing bacteria	2017/03/08							NC	N/A

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) Due to confluent growth a calculated estimate of >2800 is given.

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Mill Bay Water District

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.

Maxxam Job #: B717036

Company: Mill Bay Waterworks
 Contact Name: Donna Michael
 Mailing Address: Box 58 875 Delovine Rd
Mill Bay B.C. V0R 2P0
 Phone #: 250-743-9023
 E-mail: dmichael@shaw.ca

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.

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

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

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.

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.

After Hours Contact #: June 250-709-1447
 Regular Turnaround Time (TAT) (5 days for most tests) RUSH Please contact the lab Surcharges will be applied
 Date Required: _____

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

Sample Identification (Sample Location &/or Description)	Sample Location (eg. Tap, Wellhead)	Date/Time Sampled (24hr)	PLEASE CIRCLE				ANALYSIS REQUESTED PLEASE SELECT BELOW				VHM	Report Drinking Water Criteria DWG14			
			Samples from a Drinking Water Source? Y/N	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. Coli					
1. WS-10 Distribution	Tap	17/03/08 9:30	Y	Y	Y	Y									X
2. Well 1387	Tap	17/03/08 8:45	Y	Y	Y	Y									X
3. Well 793	Tap	17/03/08 9:00	Y	Y	Y	Y									X
4. Well 779	Tap	17/03/08 10:30	Y	Y	Y	Y									X
5.			Y	Y	Y	Y									X

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 (24 hr):	Time Sensitive	Temperature on Receipt (°C)			Custody Seal	Yes	No	N/A
<u>Donna Michael</u>	<u>17/03/08</u>	<u>11:00</u>	<u>Donna Michael</u>	<u>17/03/08</u>	<u>12:13</u>	<input type="checkbox"/>	A) <u>7</u>	B) <u>6</u>	C) <u>5</u>	Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							Just sampled & rec'd on ice: <input type="checkbox"/>	Intact? <input type="checkbox"/>					