

Your C.O.C. #: V018745

Attention: Donna Michiel

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

Report Date: 2016/03/28

Report #: R2148781

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B619499

Received: 2016/03/15, 13:58

Sample Matrix: DRINKING WATER

Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity - Water (1)	4	2016/03/16	2016/03/15	BBY6SOP-00026	SM2320B
Anions in Water by Ion Chromatography (1, 2)	4	N/A	2016/03/16	VIC SOP-00020	Based on SM-4110B
True Colour (Single Wavelength) (1)	4	N/A	2016/03/17	VIC SOP-00010	Based on SM-2120 C
Conductance - water (1)	4	N/A	2016/03/15	BBY6SOP-00026	SM-2510B
Iron Bacteria (1)	4	N/A	2016/03/15	VIC SOP-00114	SM 22 9240 m
Hardness Total (calculated as CaCO3)	4	N/A	2016/03/18	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Total) by CVAF	4	2016/03/18	2016/03/18	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Heterotropic Plate Count Water Mem. Filt (1)	4	N/A	2016/03/15	BBY4 SOP-00003	Based on SM-9215
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2016/03/18	BBY7SOP-00002	EPA 6020A R1 m
Elements by CRC ICPMS (total)	4	N/A	2016/03/17	BBY7SOP-00002	EPA 6020A R1 m
Nitrogen (Total)	4	2016/03/17	2016/03/18	BBY6SOP-00016	SM 22 4500-N C m
Ammonia-N (Preserved)	4	N/A	2016/03/17	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate + Nitrite (N) (calculated) (1)	4	N/A	2016/03/18	VIC-SOP-00005	Based SM-4500 NO2 E
Nitrogen (Organic) (Cal. TKN, NH4,N/N)	4	N/A	2016/03/18	BBY WI-00033	Auto Calc
pH Water (1, 3)	4	N/A	2016/03/15	BBY6SOP-00026	SM-4500H+B
Sat. pH and Langelier Index (@ 4.4C)	4	N/A	2016/03/18	BBY WI-00033	Auto Calc
Sat. pH and Langelier Index (@ 60C)	4	N/A	2016/03/18	BBY WI-00033	Auto Calc
Sulphate Reducing Bacteria (1)	4	N/A	2016/03/15	VIC SOP-00114	SM 22 9240 m
Sulphide	4	N/A	2016/03/18	BBY6SOP-00006	SM 22 4500-S2- D m
Total Dissolved Solids (Filt. Residue) (1)	4	N/A	2016/03/18	VIC SOP-00008	Based on SM 2540C
Total Coliform & E.Coli by MF-Chromocult (1)	4	N/A	2016/03/15	VIC SOP 00112	Based on SM-9222
Carbon (Total Organic) (4)	4	N/A	2016/03/18	BBY6SOP-00003	SM 22 5310 C m
Turbidity (1)	4	N/A	2016/03/17	VIC SOP-00011	Based on SM - 2130

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) Anions in Water by Ion Chromatography: The samples were received and analyzed in Maxxam Victoria. The data was processed and approved in Maxxam Burnaby.

(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.

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CERTIFICATE OF ANALYSIS

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Received: 2016/03/15, 13:58

Encryption Key

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

Debbie Nordbruget, Project Manager

Email: DNordbruget@maxxam.ca

Phone# (250)385-6112

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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 #: B619499
Report Date: 2016/03/28

Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					OH0845		OH0846		
Sampling Date					2016/03/15 10:15		2016/03/15 11:30		
COC Number					V018745		V018745		
	UNITS	MAC	AO	OG	WELL 21614	RDL	WELL 784	RDL	QC Batch
CONVENTIONALS									
Dissolved Nitrate (N)	mg/L	10	-	-	<0.010	0.010	3.07 (1)	0.10	8218009
Dissolved Nitrite (N)	mg/L	1	-	-	<0.010	0.010	<0.010	0.010	8218009
Misc. Inorganics									
Dissolved Chloride (Cl)	mg/L	-	250	-	5.81	0.50	8.40	0.50	8218009
Dissolved Fluoride (F)	mg/L	1.5	-	-	0.110	0.010	0.016	0.010	8218009
Dissolved Sulphate (SO4)	mg/L	-	500	-	30.0	0.50	9.66	0.50	8218009
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	110	0.50	105	0.50	8216612
Misc. Inorganics									
Alkalinity (Total as CaCO3)	mg/L	-	-	-	111	0.5	96.2	0.5	8217599
Total Organic Carbon (C)	mg/L	-	-	-	<0.50	0.50	0.76	0.50	8220829
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<0.5	0.5	<0.5	0.5	8217599
Bicarbonate (HCO3)	mg/L	-	-	-	135	0.5	117	0.5	8217599
Carbonate (CO3)	mg/L	-	-	-	<0.5	0.5	<0.5	0.5	8217599
Hydroxide (OH)	mg/L	-	-	-	<0.5	0.5	<0.5	0.5	8217599
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5	5	6	5	8221932
Nutrients									
Total Ammonia (N)	mg/L	-	-	-	0.049	0.0050	0.0055	0.0050	8219872
Total Organic Nitrogen (N)	mg/L	-	-	-	0.022	0.020	<0.10	0.10	8217492
Nitrate plus Nitrite (N)	mg/L	-	-	-	<0.010	0.010	3.1	0.10	8217495
Total Nitrogen (N)	mg/L	-	-	-	0.072	0.020	2.77	0.10	8219883
Physical Properties									
Conductivity	uS/cm	-	-	-	279	1	245	1	8217601
pH	pH	-	6.5:8.5	-	8.1		7.2		8217602
Physical Properties									
Total Dissolved Solids	mg/L	-	500	-	179	10	168	10	8220505
Turbidity	NTU	see remark	see remark	see remark	0.5	0.1	0.1	0.1	8221906
Elements									
Total Mercury (Hg)	ug/L	1	-	-	<0.010	0.010	<0.010	0.010	8220250
Total Metals by ICMS									
Total Aluminum (Al)	ug/L	-	-	100	10.3	3.0	8.0	3.0	8218337
Total Antimony (Sb)	ug/L	6	-	-	4.84	0.50	<0.50	0.50	8218337
Total Arsenic (As)	ug/L	10	-	-	6.24	0.10	<0.10	0.10	8218337
Total Barium (Ba)	ug/L	1000	-	-	11.8	1.0	5.4	1.0	8218337
Total Beryllium (Be)	ug/L	-	-	-	<0.10	0.10	<0.10	0.10	8218337
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								

Maxxam Job #: B619499
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Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

RDL = Reportable Detection Limit

(1) RDL raised due to sample matrix interference.

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					OH0845		OH0846		
Sampling Date					2016/03/15 10:15		2016/03/15 11:30		
COC Number					V018745		V018745		
	UNITS	MAC	AO	OG	WELL 21614	RDL	WELL 784	RDL	QC Batch
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	1.0	<1.0	1.0	8218337
Total Boron (B)	ug/L	5000	-	-	66	50	<50	50	8218337
Total Cadmium (Cd)	ug/L	5	-	-	0.424	0.010	<0.010	0.010	8218337
Total Chromium (Cr)	ug/L	50	-	-	<1.0	1.0	<1.0	1.0	8218337
Total Cobalt (Co)	ug/L	-	-	-	<0.50	0.50	<0.50	0.50	8218337
Total Copper (Cu)	ug/L	-	1000	-	1.90	0.20	6.95	0.20	8218337
Total Iron (Fe)	ug/L	-	300	-	19.7	5.0	6.5	5.0	8218337
Total Lead (Pb)	ug/L	10	-	-	2.19	0.20	0.42	0.20	8218337
Total Manganese (Mn)	ug/L	-	50	-	89.0	1.0	<1.0	1.0	8218337
Total Molybdenum (Mo)	ug/L	-	-	-	11.2	1.0	<1.0	1.0	8218337
Total Nickel (Ni)	ug/L	-	-	-	<1.0	1.0	2.7	1.0	8218337
Total Selenium (Se)	ug/L	50	-	-	<0.10	0.10	<0.10	0.10	8218337
Total Silicon (Si)	ug/L	-	-	-	8110	100	12600	100	8218337
Total Silver (Ag)	ug/L	-	-	-	<0.020	0.020	<0.020	0.020	8218337
Total Strontium (Sr)	ug/L	-	-	-	318	1.0	82.4	1.0	8218337
Total Thallium (Tl)	ug/L	-	-	-	<0.050	0.050	<0.050	0.050	8218337
Total Tin (Sn)	ug/L	-	-	-	<5.0	5.0	<5.0	5.0	8218337
Total Titanium (Ti)	ug/L	-	-	-	<5.0	5.0	<5.0	5.0	8218337
Total Uranium (U)	ug/L	20	-	-	5.40	0.10	<0.10	0.10	8218337
Total Vanadium (V)	ug/L	-	-	-	5.4	5.0	<5.0	5.0	8218337
Total Zinc (Zn)	ug/L	-	5000	-	<5.0	5.0	42.9	5.0	8218337
Total Zirconium (Zr)	ug/L	-	-	-	<0.50	0.50	<0.50	0.50	8218337
Total Calcium (Ca)	mg/L	-	-	-	33.9	0.050	26.9	0.050	8216836
Total Magnesium (Mg)	mg/L	-	-	-	6.20	0.050	9.24	0.050	8216836
Total Potassium (K)	mg/L	-	-	-	0.397	0.050	0.557	0.050	8216836
Total Sodium (Na)	mg/L	-	200	-	14.3	0.050	5.78	0.050	8216836
Total Sulphur (S)	mg/L	-	-	-	10.3	3.0	3.6	3.0	8216836
Parameter									
Iron Bacteria	CFU/mL	-	-	-	<25	25	*SEE NOTE (1)	25	8226775
Sulphate reducing bacteria	CFU/mL	-	-	-	<75	75	330	75	8226800
Microbiological Param.									
Heterotrophic Plate Count	CFU/mL	-	-	-	1	1	1	1	8221941
Total Coliforms	CFU/100mL	<1	-	-	1	1	<1	1	8219503
E. coli	CFU/100mL	<1	-	-	<1	1	<1	1	8219503
Parameter									
Langelier Index (@ 4.4C)	N/A	-	-	-	-0.268	N/A	-1.28	N/A	8217493
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									

Maxxam Job #: B619499
Report Date: 2016/03/28

Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

N/A = Not Applicable

(1) A range of 500 - 2200 cfu/mL is given.

Maxxam Job #: B619499
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Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					OH0845		OH0846		
Sampling Date					2016/03/15 10:15		2016/03/15 11:30		
COC Number					V018745		V018745		
	UNITS	MAC	AO	OG	WELL 21614	RDL	WELL 784	RDL	QC Batch
Langelier Index (@ 60C)	N/A	-	-	-	0.773	N/A	-0.238	N/A	8217494
Saturation pH (@ 4.4C)	N/A	-	-	-	8.35	N/A	8.51	N/A	8217493
Saturation pH (@ 60C)	N/A	-	-	-	7.31	N/A	7.47	N/A	8217494
MISCELLANEOUS									
Sulphide	mg/L	-	0.05	-	0.0093	0.0050	0.0109	0.0050	8220385
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
N/A = Not Applicable									

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					OH0847		OH0848		
Sampling Date					2016/03/15 08:45		2016/03/15 08:00		
COC Number					V018745		V018745		
	UNITS	MAC	AO	OG	WELL 1386	QC Batch	1-WS-10	RDL	QC Batch
CONVENTIONALS									
Dissolved Nitrate (N)	mg/L	10	-	-	1.06	8218009	<0.010	0.010	8218009
Dissolved Nitrite (N)	mg/L	1	-	-	<0.010	8218009	<0.010	0.010	8218009
Misc. Inorganics									
Dissolved Chloride (Cl)	mg/L	-	250	-	11.5	8218009	7.26	0.50	8218009
Dissolved Fluoride (F)	mg/L	1.5	-	-	0.072	8218009	0.118	0.010	8218009
Dissolved Sulphate (SO4)	mg/L	-	500	-	11.2	8218009	2.46	0.50	8218009
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	-	-	-	106	8216612	77.9	0.50	8216612
Misc. Inorganics									
Alkalinity (Total as CaCO3)	mg/L	-	-	-	118	8217599	123	0.5	8217599
Total Organic Carbon (C)	mg/L	-	-	-	0.57	8220829	1.17	0.50	8220829
Alkalinity (PP as CaCO3)	mg/L	-	-	-	<0.5	8217599	<0.5	0.5	8217599
Bicarbonate (HCO3)	mg/L	-	-	-	144	8217599	149	0.5	8217599
Carbonate (CO3)	mg/L	-	-	-	<0.5	8217599	<0.5	0.5	8217599
Hydroxide (OH)	mg/L	-	-	-	<0.5	8217599	<0.5	0.5	8217599
MISCELLANEOUS									
True Colour	Col. Unit	-	15	-	<5	8221932	<5	5	8221932
Nutrients									
Total Ammonia (N)	mg/L	-	-	-	0.022	8219872	0.019	0.0050	8219871
Total Organic Nitrogen (N)	mg/L	-	-	-	<0.020	8217492	0.074	0.020	8217492
Nitrate plus Nitrite (N)	mg/L	-	-	-	1.1	8217495	<0.010	0.010	8217495
Total Nitrogen (N)	mg/L	-	-	-	1.03	8219883	0.094	0.020	8219883
Physical Properties									
Conductivity	uS/cm	-	-	-	278	8217601	248	1	8217601
pH	pH	-	6.5:8.5	-	7.7	8217602	8.1		8217602
Physical Properties									
Total Dissolved Solids	mg/L	-	500	-	174	8220505	161	10	8220505
Turbidity	NTU	see remark	see remark	see remark	0.2	8221906	0.3	0.1	8221906
Elements									
Total Mercury (Hg)	ug/L	1	-	-	<0.010	8220250	<0.010	0.010	8220250
Total Metals by ICPMS									
Total Aluminum (Al)	ug/L	-	-	100	<3.0	8218337	<3.0	3.0	8218337
Total Antimony (Sb)	ug/L	6	-	-	<0.50	8218337	<0.50	0.50	8218337
Total Arsenic (As)	ug/L	10	-	-	0.26	8218337	0.67	0.10	8218337
Total Barium (Ba)	ug/L	1000	-	-	9.6	8218337	8.1	1.0	8218337
Total Beryllium (Be)	ug/L	-	-	-	<0.10	8218337	<0.10	0.10	8218337
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	8218337	<1.0	1.0	8218337
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								

Maxxam Job #: B619499
Report Date: 2016/03/28

Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Black

Exceeds both criteria/levels

RDL = Reportable Detection Limit

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					OH0847		OH0848		
Sampling Date					2016/03/15 08:45		2016/03/15 08:00		
COC Number					V018745		V018745		
	UNITS	MAC	AO	OG	WELL 1386	QC Batch	1-WS-10	RDL	QC Batch
Total Boron (B)	ug/L	5000	-	-	68	8218337	93	50	8218337
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	8218337	<0.010	0.010	8218337
Total Chromium (Cr)	ug/L	50	-	-	<1.0	8218337	<1.0	1.0	8218337
Total Cobalt (Co)	ug/L	-	-	-	<0.50	8218337	<0.50	0.50	8218337
Total Copper (Cu)	ug/L	-	1000	-	26.3	8218337	<0.20	0.20	8218337
Total Iron (Fe)	ug/L	-	300	-	29.3	8218337	34.2	5.0	8218337
Total Lead (Pb)	ug/L	10	-	-	1.24	8218337	<0.20	0.20	8218337
Total Manganese (Mn)	ug/L	-	50	-	19.0	8218337	77.6	1.0	8218337
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	8218337	<1.0	1.0	8218337
Total Nickel (Ni)	ug/L	-	-	-	1.3	8218337	<1.0	1.0	8218337
Total Selenium (Se)	ug/L	50	-	-	<0.10	8218337	<0.10	0.10	8218337
Total Silicon (Si)	ug/L	-	-	-	10400	8218337	8870	100	8218337
Total Silver (Ag)	ug/L	-	-	-	<0.020	8218337	<0.020	0.020	8218337
Total Strontium (Sr)	ug/L	-	-	-	235	8218337	226	1.0	8218337
Total Thallium (Tl)	ug/L	-	-	-	<0.050	8218337	<0.050	0.050	8218337
Total Tin (Sn)	ug/L	-	-	-	<5.0	8218337	<5.0	5.0	8218337
Total Titanium (Ti)	ug/L	-	-	-	<5.0	8218337	<5.0	5.0	8218337
Total Uranium (U)	ug/L	20	-	-	0.33	8218337	1.38	0.10	8218337
Total Vanadium (V)	ug/L	-	-	-	<5.0	8218337	<5.0	5.0	8218337
Total Zinc (Zn)	ug/L	-	5000	-	21.4	8218337	<5.0	5.0	8218337
Total Zirconium (Zr)	ug/L	-	-	-	<0.50	8218337	<0.50	0.50	8218337
Total Calcium (Ca)	mg/L	-	-	-	29.7	8216836	23.8	0.050	8216836
Total Magnesium (Mg)	mg/L	-	-	-	7.61	8216836	4.46	0.050	8216836
Total Potassium (K)	mg/L	-	-	-	0.545	8216836	0.730	0.050	8216836
Total Sodium (Na)	mg/L	-	200	-	15.6	8216836	21.8	0.050	8216836
Total Sulphur (S)	mg/L	-	-	-	3.9	8216836	<3.0	3.0	8216836
Parameter									
Iron Bacteria	CFU/mL	-	-	-	<25	8226775	<25	25	8226775
Sulphate reducing bacteria	CFU/mL	-	-	-	<75	8226800	<75	75	8226800
Microbiological Param.									
Heterotrophic Plate Count	CFU/mL	-	-	-	<1	8221941	<1	1	8221941
Total Coliforms	CFU/100mL	<1	-	-	<1	8219503	1	1	8219503
E. coli	CFU/100mL	<1	-	-	<1	8219503	<1	1	8219503
Parameter									
Langelier Index (@ 4.4C)	N/A	-	-	-	-0.729	8217493	-0.324	N/A	8217493
Langelier Index (@ 60C)	N/A	-	-	-	0.312	8217494	0.716	N/A	8217494
Saturation pH (@ 4.4C)	N/A	-	-	-	8.38	8217493	8.45	N/A	8217493
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								

Maxxam Job #: B619499
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Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

RDL = Reportable Detection Limit

N/A = Not Applicable

Maxxam Job #: B619499
Report Date: 2016/03/28

Mill Bay Water District

VIHA POTABILITY WITH MICRO AND CV HG (DRINKING WATER)

Maxxam ID					OH0847		OH0848		
Sampling Date					2016/03/15 08:45		2016/03/15 08:00		
COC Number					V018745		V018745		
	UNITS	MAC	AO	OG	WELL 1386	QC Batch	1-WS-10	RDL	QC Batch
Saturation pH (@ 60C)	N/A	-	-	-	7.34	8217494	7.41	N/A	8217494
MISCELLANEOUS									
Sulphide	mg/L	-	0.05	-	0.0078	8220385	0.0122	0.0050	8220385
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
N/A = Not Applicable									

GENERAL COMMENTS

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

Package 1	6.7°C
Package 2	9.7°C

MAC,AO,OG: The guidelines that have been included in this report have been taken from the Canadian Drinking Water Quality Summary Table, October 2014.

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
8217599	Alkalinity (PP as CaCO3)	2016/03/15	20	N/A			<0.5	mg/L	NC	20
8217599	Alkalinity (Total as CaCO3)	2016/03/15	NC	80 - 120	92	80 - 120	0.5, RDL=0.5	mg/L	1.3	20
8217599	Bicarbonate (HCO3)	2016/03/15					0.6, RDL=0.5	mg/L	1.3	20
8217599	Carbonate (CO3)	2016/03/15					<0.5	mg/L	NC	20
8217599	Hydroxide (OH)	2016/03/15					<0.5	mg/L	NC	20
8217601	Conductivity	2016/03/15			98	90 - 110	<1	uS/cm	0.36	20
8217602	pH	2016/03/15			101	96 - 104			0.25	N/A
8218009	Dissolved Chloride (Cl)	2016/03/16	97	80 - 120	104	80 - 120	<0.50	mg/L	0.30	20
8218009	Dissolved Fluoride (F)	2016/03/16	99	80 - 120	99	80 - 120	<0.010	mg/L	0.99	20
8218009	Dissolved Nitrate (N)	2016/03/16	92	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8218009	Dissolved Nitrite (N)	2016/03/16	94	80 - 120	103	80 - 120	<0.010	mg/L	NC	20
8218009	Dissolved Sulphate (SO4)	2016/03/16	103	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
8218337	Total Aluminum (Al)	2016/03/17	99	80 - 120	107	80 - 120	<3.0	ug/L	NC	20
8218337	Total Antimony (Sb)	2016/03/17	NC	80 - 120	101	80 - 120	<0.50	ug/L	0.60	20
8218337	Total Arsenic (As)	2016/03/17	NC	80 - 120	97	80 - 120	<0.10	ug/L	0.59	20
8218337	Total Barium (Ba)	2016/03/17	NC	80 - 120	100	80 - 120	<1.0	ug/L	0.13	20
8218337	Total Beryllium (Be)	2016/03/17	101	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
8218337	Total Bismuth (Bi)	2016/03/17	98	80 - 120	98	80 - 120	<1.0	ug/L	NC	20
8218337	Total Boron (B)	2016/03/17	NC	80 - 120	105	80 - 120	<50	ug/L	NC	20
8218337	Total Cadmium (Cd)	2016/03/17	100	80 - 120	98	80 - 120	<0.010	ug/L	0	20
8218337	Total Chromium (Cr)	2016/03/17	100	80 - 120	99	80 - 120	<1.0	ug/L	NC	20
8218337	Total Cobalt (Co)	2016/03/17	99	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
8218337	Total Copper (Cu)	2016/03/17	98	80 - 120	98	80 - 120	<0.20	ug/L	0.89	20
8218337	Total Iron (Fe)	2016/03/17	101	80 - 120	107	80 - 120	<5.0	ug/L	NC	20
8218337	Total Lead (Pb)	2016/03/17	98	80 - 120	99	80 - 120	<0.20	ug/L	0.46	20
8218337	Total Manganese (Mn)	2016/03/17	NC	80 - 120	98	80 - 120	<1.0	ug/L	0.92	20
8218337	Total Molybdenum (Mo)	2016/03/17	NC	80 - 120	98	80 - 120	<1.0	ug/L	0.34	20
8218337	Total Nickel (Ni)	2016/03/17	98	80 - 120	100	80 - 120	<1.0	ug/L	NC	20
8218337	Total Selenium (Se)	2016/03/17	99	80 - 120	96	80 - 120	<0.10	ug/L	NC	20
8218337	Total Silicon (Si)	2016/03/17					<100	ug/L	1.9	20
8218337	Total Silver (Ag)	2016/03/17	99	80 - 120	96	80 - 120	<0.020	ug/L	NC	20
8218337	Total Strontium (Sr)	2016/03/17	NC	80 - 120	97	80 - 120	<1.0	ug/L	2.1	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
8218337	Total Thallium (Tl)	2016/03/17	97	80 - 120	97	80 - 120	<0.050	ug/L	NC	20
8218337	Total Tin (Sn)	2016/03/17	104	80 - 120	98	80 - 120	<5.0	ug/L	NC	20
8218337	Total Titanium (Ti)	2016/03/17	102	80 - 120	91	80 - 120	<5.0	ug/L	NC	20
8218337	Total Uranium (U)	2016/03/17	NC	80 - 120	99	80 - 120	<0.10	ug/L	0	20
8218337	Total Vanadium (V)	2016/03/17	NC	80 - 120	96	80 - 120	<5.0	ug/L	NC	20
8218337	Total Zinc (Zn)	2016/03/17	99	80 - 120	101	80 - 120	<5.0	ug/L	NC	20
8218337	Total Zirconium (Zr)	2016/03/17					<0.50	ug/L	NC	20
8219503	E. coli	2016/03/15							NC	N/A
8219503	Total Coliforms	2016/03/15							NC	N/A
8219871	Total Ammonia (N)	2016/03/17	NC	80 - 120	101	80 - 120	0.0083, RDL=0.0050	mg/L	1.1	20
8219872	Total Ammonia (N)	2016/03/17	NC	80 - 120	99	80 - 120	<0.0050	mg/L	1.1	20
8219883	Total Nitrogen (N)	2016/03/18	NC	80 - 120	93	80 - 120	<0.020	mg/L	0.61	20
8220250	Total Mercury (Hg)	2016/03/18	93	80 - 120	98	80 - 120	<0.010	ug/L	NC	20
8220385	Sulphide	2016/03/18	86	80 - 120	108	80 - 120	0.0091, RDL=0.0050	mg/L	7.7	20
8220505	Total Dissolved Solids	2016/03/18			107	80 - 120	<10	mg/L	0	20
8220829	Total Organic Carbon (C)	2016/03/18	107	80 - 120	105	80 - 120	0.67, RDL=0.50	mg/L	NC	20
8221906	Turbidity	2016/03/17			104	80 - 120	<0.1	NTU	0	20
8221932	True Colour	2016/03/17			92	80 - 120	<5	Col. Unit	NC	10
8221941	Heterotrophic Plate Count	2016/03/15							NC	N/A
8226775	Iron Bacteria	2016/03/15							NC (1)	N/A
8226800	Sulphate reducing bacteria	2016/03/15							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 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).

(1) A range of 500 - 2200 cfu/mL is given.

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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).



Andy Lu, Data Validation Coordinator



David Nadler, AASc, Victoria Operations Manager



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.