Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: LEECH STUDY
Your C.O.C. #: 08459791

Attention: Christoph Moch

Capital Regional District
Water Department
479 Island Hwy
Victoria, BC
Canada V9B 1H7

Report Date: 2019/01/15
Report #: R2674247
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B902278
Received: 2019/01/10, 12:48

Sample Matrix: DRINKING WATER
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hardness Total (calculated as CaCO3) (1)	6	N/A	2019/01/15	BBY WI-00033	Auto Calc
Mercury (Total) by CVAF	6	2019/01/12	2019/01/12	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	6	N/A	2019/01/15	BBY WI-00033	Auto Calc
Elements by CRC ICPMS (total)	2	N/A	2019/01/14	BBY7SOP-00003,	EPA 6020b R2 m
Elements by CRC ICPMS (total)	4	2019/01/11	2019/01/14	BBY7SOP-00003 BBY7SOP-00002	EPA 6020b R2 m

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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. Maxxam is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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. When sampling is not conducted by Maxxam, results relate to the supplied samples tested.

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) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).

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Encryption Key

Maxxam
15 Jan 2019 13:34:17

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
==========
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.

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ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Maxxam ID					VB5193	VB5194	VB5196	VB5197		
Sampling Date					2019/01/07 14:15	2019/01/07 14:50	2019/01/07 12:30	2019/01/07 09:00		
COC Number					08459791	08459791	08459791	08459791		
	UNITS	MAC	AO	OG	LEECH HEAD	WEEKS OUT	TUNNEL	CRAGG	RDL	QC Batch
Total Metals by ICPMS										
Total Aluminum (Al)	ug/L	-	-	100	**109**	**159**	86.7	70.9	3.0	9289592
Total Antimony (Sb)	ug/L	6	-	-	<0.50	<0.50	<0.50	<0.50	0.50	9289592
Total Arsenic (As)	ug/L	10	-	-	<0.10	<0.10	<0.10	<0.10	0.10	9289592
Total Barium (Ba)	ug/L	1000	-	-	2.6	3.1	2.4	1.7	1.0	9289592
Total Beryllium (Be)	ug/L	-	-	-	<0.10	<0.10	<0.10	<0.10	0.10	9289592
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0	9289592
Total Boron (B)	ug/L	5000	-	-	<50	<50	<50	<50	50	9289592
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	<0.010	<0.010	<0.010	0.010	9289592
Total Chromium (Cr)	ug/L	50	-	-	<1.0	<1.0	<1.0	<1.0	1.0	9289592
Total Cobalt (Co)	ug/L	-	-	-	<0.20	<0.20	<0.20	<0.20	0.20	9289592
Total Copper (Cu)	ug/L	-	1000	-	<0.50	0.59	0.84	<0.50	0.50	9289592
Total Iron (Fe)	ug/L	-	300	-	54	102	32	18	10	9289592
Total Lead (Pb)	ug/L	10	-	-	<0.20	<0.20	<0.20	<0.20	0.20	9289592
Total Lithium (Li)	ug/L	-	-	-	<2.0	<2.0	<2.0	<2.0	2.0	9289592
Total Manganese (Mn)	ug/L	-	50	-	2.2	3.6	<1.0	<1.0	1.0	9289592
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	<1.0	<1.0	<1.0	1.0	9289592
Total Nickel (Ni)	ug/L	-	-	-	1.5	<1.0	<1.0	<1.0	1.0	9289592
Total Selenium (Se)	ug/L	50	-	-	<0.10	<0.10	<0.10	<0.10	0.10	9289592
Total Silicon (Si)	ug/L	-	-	-	1810	1910	2220	1890	100	9289592
Total Silver (Ag)	ug/L	-	-	-	<0.020	<0.020	0.074	<0.020	0.020	9289592
Total Strontium (Sr)	ug/L	-	-	-	8.6	9.2	10.6	7.1	1.0	9289592
Total Thallium (Tl)	ug/L	-	-	-	<0.010	<0.010	<0.010	<0.010	0.010	9289592
Total Tin (Sn)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	9289592
Total Titanium (Ti)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	9289592
Total Uranium (U)	ug/L	20	-	-	<0.10	<0.10	<0.10	<0.10	0.10	9289592
Total Vanadium (V)	ug/L	-	-	-	<5.0	<5.0	<5.0	<5.0	5.0	9289592
Total Zinc (Zn)	ug/L	-	5000	-	<5.0	<5.0	<5.0	<5.0	5.0	9289592
Total Zirconium (Zr)	ug/L	-	-	-	<0.10	<0.10	<0.10	<0.10	0.10	9289592

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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Capital Regional District
Client Project #: LEECH STUDY

TOT. METALS W/ CV HG FOR DRINKING WATER (DRINKING WATER)

Maxxam ID					VB5192			VB5193		VB5194		
Sampling Date					2019/01/07 15:20			2019/01/07 14:15		2019/01/07 14:50		
COC Number					08459791			08459791		08459791		
	UNITS	MAC	AO	OG	CHRIS CREEK	RDL	QC Batch	LEECH HEAD	QC Batch	WEEKS OUT	RDL	QC Batch
Calculated Parameters												
Total Hardness (CaCO3)	mg/L	-	-	-	5.34	0.50	9287393	5.09	9287393	5.33	0.50	9287393
Elements												
Total Mercury (Hg)	ug/L	1	-	-	<0.0020	0.0020	9290104	0.0020	9290092	0.0027	0.0020	9290104
Total Metals by ICPMS												
Total Aluminum (Al)	ug/L	-	-	100	51.1	3.0	9291080					
Total Antimony (Sb)	ug/L	6	-	-	<0.50	0.50	9291080					
Total Arsenic (As)	ug/L	10	-	-	<0.10	0.10	9291080					
Total Barium (Ba)	ug/L	1000	-	-	1.9	1.0	9291080					
Total Beryllium (Be)	ug/L	-	-	-	<0.10	0.10	9291080					
Total Bismuth (Bi)	ug/L	-	-	-	<1.0	1.0	9291080					
Total Boron (B)	ug/L	5000	-	-	<50	50	9291080					
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	0.010	9291080					
Total Chromium (Cr)	ug/L	50	-	-	<1.0	1.0	9291080					
Total Cobalt (Co)	ug/L	-	-	-	<0.20	0.20	9291080					
Total Copper (Cu)	ug/L	-	1000	-	0.28	0.20	9291080					
Total Iron (Fe)	ug/L	-	300	-	14.2	5.0	9291080					
Total Lead (Pb)	ug/L	10	-	-	<0.20	0.20	9291080					
Total Manganese (Mn)	ug/L	-	50	-	<1.0	1.0	9291080					
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	1.0	9291080					
Total Nickel (Ni)	ug/L	-	-	-	<1.0	1.0	9291080					
Total Selenium (Se)	ug/L	50	-	-	<0.10	0.10	9291080					
Total Silicon (Si)	ug/L	-	-	-	1780	100	9291080					
Total Silver (Ag)	ug/L	-	-	-	<0.020	0.020	9291080					
Total Strontium (Sr)	ug/L	-	-	-	6.5	1.0	9291080					
Total Thallium (Tl)	ug/L	-	-	-	<0.010	0.010	9291080					
Total Tin (Sn)	ug/L	-	-	-	<5.0	5.0	9291080					
Total Titanium (Ti)	ug/L	-	-	-	<5.0	5.0	9291080					
Total Uranium (U)	ug/L	20	-	-	<0.10	0.10	9291080					
Total Vanadium (V)	ug/L	-	-	-	<5.0	5.0	9291080					
Total Zinc (Zn)	ug/L	-	5000	-	<5.0	5.0	9291080					
Total Zirconium (Zr)	ug/L	-	-	-	<0.10	0.10	9291080					
Total Calcium (Ca)	mg/L	-	-	-	1.36	0.050	9287821	1.38	9287821	1.48	0.050	9287821
Total Magnesium (Mg)	mg/L	-	-	-	0.473	0.050	9287821	0.400	9287821	0.395	0.050	9287821

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

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TOT. METALS W/ CV HG FOR DRINKING WATER (DRINKING WATER)

Maxxam ID					VB5192			VB5193		VB5194		
Sampling Date					2019/01/07 15:20			2019/01/07 14:15		2019/01/07 14:50		
COC Number					08459791			08459791		08459791		
	UNITS	MAC	AO	OG	CHRIS CREEK	RDL	QC Batch	LEECH HEAD	QC Batch	WEEKS OUT	RDL	QC Batch
Total Potassium (K)	mg/L	-	-	-	0.058	0.050	9287821	0.086	9287821	0.101	0.050	9287821
Total Sodium (Na)	mg/L	-	200	-	1.19	0.050	9287821	1.24	9287821	1.29	0.050	9287821
Total Sulphur (S)	mg/L	-	-	-	<3.0	3.0	9287821	<3.0	9287821	<3.0	3.0	9287821

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

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TOT. METALS W/ CV HG FOR DRINKING WATER (DRINKING WATER)

Maxxam ID					VB5195			VB5196	VB5197		
Sampling Date					2019/01/07 10:15			2019/01/07 12:30	2019/01/07 09:00		
COC Number					08459791			08459791	08459791		
	UNITS	MAC	AO	OG	W. LEECH	RDL	QC Batch	TUNNEL	CRAGG	RDL	QC Batch
Calculated Parameters											
Total Hardness (CaCO3)	mg/L	-	-	-	5.01	0.50	9287393	6.55	6.01	0.50	9287393
Elements											
Total Mercury (Hg)	ug/L	1	-	-	<0.0020	0.0020	9290104	<0.0020	<0.0020	0.0020	9290104
Total Metals by ICPMS											
Total Aluminum (Al)	ug/L	-	-	100	70.5	3.0	9291080				
Total Antimony (Sb)	ug/L	6	-	-	<0.50	0.50	9291080				
Total Arsenic (As)	ug/L	10	-	-	<0.10	0.10	9291080				
Total Barium (Ba)	ug/L	1000	-	-	3.0	1.0	9291080				
Total Beryllium (Be)	ug/L	-	-	-	<0.10	0.10	9291080				
Total Bismuth (Bi)	ug/L	-	-	-	<1.0 (1)	1.0	9291080				
Total Boron (B)	ug/L	5000	-	-	<50	50	9291080				
Total Cadmium (Cd)	ug/L	5	-	-	<0.010	0.010	9291080				
Total Chromium (Cr)	ug/L	50	-	-	<1.0	1.0	9291080				
Total Cobalt (Co)	ug/L	-	-	-	<0.20	0.20	9291080				
Total Copper (Cu)	ug/L	-	1000	-	0.36	0.20	9291080				
Total Iron (Fe)	ug/L	-	300	-	23.1	5.0	9291080				
Total Lead (Pb)	ug/L	10	-	-	<0.20	0.20	9291080				
Total Manganese (Mn)	ug/L	-	50	-	<1.0	1.0	9291080				
Total Molybdenum (Mo)	ug/L	-	-	-	<1.0	1.0	9291080				
Total Nickel (Ni)	ug/L	-	-	-	<1.0	1.0	9291080				
Total Selenium (Se)	ug/L	50	-	-	<0.10	0.10	9291080				
Total Silicon (Si)	ug/L	-	-	-	2150	100	9291080				
Total Silver (Ag)	ug/L	-	-	-	<0.020	0.020	9291080				
Total Strontium (Sr)	ug/L	-	-	-	10.3	1.0	9291080				
Total Thallium (Tl)	ug/L	-	-	-	<0.010	0.010	9291080				
Total Tin (Sn)	ug/L	-	-	-	<5.0	5.0	9291080				
Total Titanium (Ti)	ug/L	-	-	-	<5.0	5.0	9291080				
Total Uranium (U)	ug/L	20	-	-	<0.10	0.10	9291080				
Total Vanadium (V)	ug/L	-	-	-	<5.0	5.0	9291080				
Total Zinc (Zn)	ug/L	-	5000	-	<5.0	5.0	9291080				
Total Zirconium (Zr)	ug/L	-	-	-	<0.10	0.10	9291080				
Total Calcium (Ca)	mg/L	-	-	-	1.42	0.050	9287821	1.92	1.66	0.050	9287821

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

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(1) Matrix Spike outside acceptance criteria (10% of analytes failure allowed).

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TOT. METALS W/ CV HG FOR DRINKING WATER (DRINKING WATER)

Maxxam ID					VB5195			VB5196	VB5197		
Sampling Date					2019/01/07 10:15			2019/01/07 12:30	2019/01/07 09:00		
COC Number					08459791			08459791	08459791		
	UNITS	MAC	AO	OG	W. LEECH	RDL	QC Batch	TUNNEL	CRAGG	RDL	QC Batch
Total Magnesium (Mg)	mg/L	-	-	-	0.357	0.050	9287821	0.424	0.454	0.050	9287821
Total Potassium (K)	mg/L	-	-	-	0.194	0.050	9287821	0.134	0.056	0.050	9287821
Total Sodium (Na)	mg/L	-	200	-	1.61	0.050	9287821	1.37	1.11	0.050	9287821
Total Sulphur (S)	mg/L	-	-	-	<3.0	3.0	9287821	<3.0	<3.0	3.0	9287821

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GENERAL COMMENTS

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

Package 1	5.0°C

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.
4. To ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of 1.0 NTU or less.
Measurement of Uncertainty has not been accounted for when stating conformity to the selected criteria, where applicable.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

Capital Regional District
Client Project #: LEECH STUDY

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9289592	Total Aluminum (Al)	2019/01/14	102	80 - 120	103	80 - 120	<3.0	ug/L	20	20
9289592	Total Antimony (Sb)	2019/01/14	102	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
9289592	Total Arsenic (As)	2019/01/14	110	80 - 120	105	80 - 120	<0.10	ug/L	20	20
9289592	Total Barium (Ba)	2019/01/14	NC	80 - 120	101	80 - 120	<1.0	ug/L	1.1	20
9289592	Total Beryllium (Be)	2019/01/14	99	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
9289592	Total Bismuth (Bi)	2019/01/14	96	80 - 120	105	80 - 120	<1.0	ug/L	NC	20
9289592	Total Boron (B)	2019/01/14	93	80 - 120	98	80 - 120	<50	ug/L	3.1	20
9289592	Total Cadmium (Cd)	2019/01/14	96	80 - 120	99	80 - 120	<0.010	ug/L	0	20
9289592	Total Chromium (Cr)	2019/01/14	93	80 - 120	96	80 - 120	<1.0	ug/L	NC	20
9289592	Total Cobalt (Co)	2019/01/14	90	80 - 120	93	80 - 120	<0.20	ug/L	2.5	20
9289592	Total Copper (Cu)	2019/01/14	86	80 - 120	93	80 - 120	<0.50	ug/L	0.65	20
9289592	Total Iron (Fe)	2019/01/14	108	80 - 120	109	80 - 120	<10	ug/L	13	20
9289592	Total Lead (Pb)	2019/01/14	101	80 - 120	105	80 - 120	<0.20	ug/L	NC	20
9289592	Total Lithium (Li)	2019/01/14	101	80 - 120	101	80 - 120	<2.0	ug/L	1.1	20
9289592	Total Manganese (Mn)	2019/01/14	96	80 - 120	98	80 - 120	<1.0	ug/L	1.3	20
9289592	Total Molybdenum (Mo)	2019/01/14	NC	80 - 120	101	80 - 120	<1.0	ug/L	3.3	20
9289592	Total Nickel (Ni)	2019/01/14	87	80 - 120	93	80 - 120	<1.0	ug/L	2.3	20
9289592	Total Selenium (Se)	2019/01/14	99	80 - 120	97	80 - 120	<0.10	ug/L	6.0	20
9289592	Total Silicon (Si)	2019/01/14	119	80 - 120	118	80 - 120	<100	ug/L	1.5	20
9289592	Total Silver (Ag)	2019/01/14	96	80 - 120	102	80 - 120	<0.020	ug/L	NC	20
9289592	Total Strontium (Sr)	2019/01/14	NC	80 - 120	101	80 - 120	<1.0	ug/L	1.6	20
9289592	Total Thallium (Tl)	2019/01/14	102	80 - 120	105	80 - 120	<0.010	ug/L	15	20
9289592	Total Tin (Sn)	2019/01/14	101	80 - 120	98	80 - 120	<5.0	ug/L	NC	20
9289592	Total Titanium (Ti)	2019/01/14	99	80 - 120	100	80 - 120	<5.0	ug/L	NC	20
9289592	Total Uranium (U)	2019/01/14	104	80 - 120	103	80 - 120	<0.10	ug/L	1.1	20
9289592	Total Vanadium (V)	2019/01/14	96	80 - 120	96	80 - 120	<5.0	ug/L	NC	20
9289592	Total Zinc (Zn)	2019/01/14	88	80 - 120	96	80 - 120	<5.0	ug/L	1.0	20
9289592	Total Zirconium (Zr)	2019/01/14	103	80 - 120	99	80 - 120	<0.10	ug/L	NC	20
9290092	Total Mercury (Hg)	2019/01/12	103	80 - 120	97	80 - 120	<0.0020	ug/L	NC	20
9290104	Total Mercury (Hg)	2019/01/12	95	80 - 120	100	80 - 120	<0.0020	ug/L	NC	20
9291080	Total Aluminum (Al)	2019/01/14	102	80 - 120	102	80 - 120	<3.0	ug/L	1.5	20
9291080	Total Antimony (Sb)	2019/01/14	98	80 - 120	101	80 - 120	<0.50	ug/L	NC	20

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Maxxam Job #: B902278
Report Date: 2019/01/15

QUALITY ASSURANCE REPORT(CONT'D)

Capital Regional District
Client Project #: LEECH STUDY

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9291080	Total Arsenic (As)	2019/01/14	100	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
9291080	Total Barium (Ba)	2019/01/14	100	80 - 120	101	80 - 120	<1.0	ug/L	0.60	20
9291080	Total Beryllium (Be)	2019/01/14	101	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
9291080	Total Bismuth (Bi)	2019/01/14	76 (1)	80 - 120	99	80 - 120	<1.0	ug/L	NC	20
9291080	Total Boron (B)	2019/01/14	96	80 - 120	101	80 - 120	<50	ug/L	NC	20
9291080	Total Cadmium (Cd)	2019/01/14	99	80 - 120	100	80 - 120	<0.010	ug/L	NC	20
9291080	Total Chromium (Cr)	2019/01/14	99	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
9291080	Total Cobalt (Co)	2019/01/14	97	80 - 120	99	80 - 120	<0.20	ug/L	NC	20
9291080	Total Copper (Cu)	2019/01/14	97	80 - 120	98	80 - 120	<0.20	ug/L	1.9	20
9291080	Total Iron (Fe)	2019/01/14	96	80 - 120	98	80 - 120	<5.0	ug/L	2.6	20
9291080	Total Lead (Pb)	2019/01/14	99	80 - 120	100	80 - 120	<0.20	ug/L	NC	20
9291080	Total Manganese (Mn)	2019/01/14	99	80 - 120	102	80 - 120	<1.0	ug/L	NC	20
9291080	Total Molybdenum (Mo)	2019/01/14	96	80 - 120	101	80 - 120	<1.0	ug/L	NC	20
9291080	Total Nickel (Ni)	2019/01/14	99	80 - 120	99	80 - 120	<1.0	ug/L	NC	20
9291080	Total Selenium (Se)	2019/01/14	96	80 - 120	97	80 - 120	<0.10	ug/L	NC	20
9291080	Total Silicon (Si)	2019/01/14	95	80 - 120	99	80 - 120	<100	ug/L	0.34	20
9291080	Total Silver (Ag)	2019/01/14	82	80 - 120	99	80 - 120	<0.020	ug/L	NC	20
9291080	Total Strontium (Sr)	2019/01/14	97	80 - 120	99	80 - 120	<1.0	ug/L	1.2	20
9291080	Total Thallium (Tl)	2019/01/14	97	80 - 120	100	80 - 120	<0.010	ug/L	NC	20
9291080	Total Tin (Sn)	2019/01/14	97	80 - 120	103	80 - 120	<5.0	ug/L	NC	20
9291080	Total Titanium (Ti)	2019/01/14	102	80 - 120	107	80 - 120	<5.0	ug/L	NC	20
9291080	Total Uranium (U)	2019/01/14	99	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
9291080	Total Vanadium (V)	2019/01/14	101	80 - 120	102	80 - 120	<5.0	ug/L	NC	20
9291080	Total Zinc (Zn)	2019/01/14	103	80 - 120	103	80 - 120	<5.0	ug/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9291080	Total Zirconium (Zr)	2019/01/14	98	80 - 120	99	80 - 120	<0.10	ug/L	NC	20

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) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Capital Regional District
Client Project #: LEECH STUDY

VALIDATION SIGNATURE PAGE

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

Andy Lu, Ph.D., P.Chem., 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.

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CHAIN OF CUSTODY RECO

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08459791

BBY FCD-00077/05

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Invoice Information		Report Information (if differs from Invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	Capital Regional District	Company Name:	Capital Regional District	Quotation #:		[X] Regular TAT 5 days (Most analyses)
Contact Name:	Christoph Moch	Contact Name:	Christoph Moch, Jessica Dupuis, Jennifer Blaney	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	479 Island Highway	Address:		Project #:	Leech Study	Rush TAT (Surcharges will be applied)
	Victoria, BC PC: V9B 1H7		PC:	Site Location:		[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:	250-474-9603	Phone:	CM 250-474-9603; JD 250-474-9643; JB 250-474-9680	Site #:		
Email:	cmoch@crd.bc.ca	Email:	cmoch@crd.bc.ca; jdupuis@crd.bc.ca; jblaney@crd.bc.ca	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[X] Drinking Water [ ] BC Water Quality	

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

Rush Confirmation #:

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	BTEX/VPH [ ]	MTBE [ ] VOC/VPH [ ]	EPH [ ]	TEH [ ]	PAH [ ]	LEPH/HEPH [ ]	CCME-PHC	BTEX/ F1 [ ] F2 - F4 [ ]	Dissolved Metals Filtered? [ ] Preserved? [ ]	Dissolved Mercury Filtered? [ ] Preserved? [ ]	Total Metals Field Preserved? [X]	Total Mercury Field Preserved? [X]	Chloride [ ]	Fluoride [ ]	Sulphate [ ]	TSS [ ]	TDS [ ]	BOD [ ]	COD [ ]	pH [ ]	Conductivity [ ]	Alkalinity [ ]	Nitrite [ ]	Nitrate [ ]	Ammonia [ ]	Bromate	Bromide	TOC	DBPs (THMs)	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	Chris Creek		2019/01/07	15:20												X	X																			
2	Leech Head			14:15												X	X																			
3	Weeks Out			14:50												X	X																			
4	W. Leech			10:15												X	X																			
5	Tunnel			12:30												X	X																			
6	Cragg		↓	09:00												X	X																			
7																																			
8																																			
9																																			
10																																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
A	a	5, 5, 5

COOLING MEDIA PRESENT Y / N

COMMENTS

B902278_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
			Marlin	2019/01/10	1248	