

Analytical Report

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Reference Number	1137814-1
Sample Date	May 16, 2016
Sample Time	07:25
Sample Location	
Sample Description	Mann Park Stn.
Sample Matrix	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable					
Arsenic	Extractable mg/L	0.0057	0.0002	0.010	Below MAC
Copper	Extractable mg/L	0.012	0.001	1.0	Below AO
Lead	Extractable mg/L	<0.0001	0.0001	0.01	Below MAC
Microbiological Analysis					
Total Coliforms	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Routine Water					
Iron	Extractable mg/L	0.007	0.005	0.3	Below AO
Manganese	Extractable mg/L	0.031	0.001	0.05	Below AO

Analytical Report

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Reference Number	1137814-2
Sample Date	May 16, 2016
Sample Time	07:15
Sample Location	
Sample Description	Malabar Strn.
Sample Matrix	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable					
Arsenic	Extractable mg/L	0.0050	0.0002	0.010	Below MAC
Copper	Extractable mg/L	0.003	0.001	1.0	Below AO
Lead	Extractable mg/L	<0.0001	0.0001	0.01	Below MAC
Microbiological Analysis					
Total Coliforms	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Routine Water					
Iron	Extractable mg/L	0.010	0.005	0.3	Below AO
Manganese	Extractable mg/L	0.019	0.001	0.05	Below AO

Analytical Report

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Reference Number	1137814-3
Sample Date	May 16, 2016
Sample Time	07:05
Sample Location	
Sample Description	Marine Dr. Stn.
Sample Matrix	Drinking Water

Analyte		Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable						
Arsenic	Extractable	mg/L	0.0036	0.0002	0.010	Below MAC
Copper	Extractable	mg/L	0.004	0.001	1.0	Below AO
Lead	Extractable	mg/L	<0.0001	0.0001	0.01	Below MAC
Microbiological Analysis						
Total Coliforms	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Routine Water						
Iron	Extractable	mg/L	0.033	0.005	0.3	Below AO
Manganese	Extractable	mg/L	0.025	0.001	0.05	Below AO

Analytical Report

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Reference Number	1137814-4
Sample Date	May 16, 2016
Sample Time	07:38
Sample Location	
Sample Description	Everall Stn
Sample Matrix	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable					
Arsenic	Extractable mg/L	0.0063	0.0002	0.010	Below MAC
Copper	Extractable mg/L	0.002	0.001	1.0	Below AO
Lead	Extractable mg/L	<0.0001	0.0001	0.01	Below MAC
Microbiological Analysis					
Total Coliforms	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Routine Water					
Iron	Extractable mg/L	0.009	0.005	0.3	Below AO
Manganese	Extractable mg/L	0.075	0.001	0.05	Above AO

Analytical Report

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Reference Number	1137814-5
Sample Date	May 16, 2016
Sample Time	07:47
Sample Location	
Sample Description	Russell Ave. Stn
Sample Matrix	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable					
Arsenic	Extractable mg/L	0.0062	0.0002	0.010	Below MAC
Copper	Extractable mg/L	0.002	0.001	1.0	Below AO
Lead	Extractable mg/L	0.0004	0.0001	0.01	Below MAC
Microbiological Analysis					
Total Coliforms	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Routine Water					
Iron	Extractable mg/L	0.008	0.005	0.3	Below AO
Manganese	Extractable mg/L	0.056	0.001	0.05	Above AO

Analytical Report

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Reference Number	1137814-6
Sample Date	May 16, 2016
Sample Time	08:10
Sample Location	
Sample Description	Stevens Strn.
Sample Matrix	Drinking Water

Analyte		Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable						
Arsenic	Extractable	mg/L	0.0058	0.0002	0.010	Below MAC
Copper	Extractable	mg/L	0.003	0.001	1.0	Below AO
Lead	Extractable	mg/L	<0.0001	0.0001	0.01	Below MAC
Microbiological Analysis						
Total Coliforms	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Routine Water						
Iron	Extractable	mg/L	0.013	0.005	0.3	Below AO
Manganese	Extractable	mg/L	0.070	0.001	0.05	Above AO

Analytical Report

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Reference Number	1137814-7
Sample Date	May 16, 2016
Sample Time	08:22
Sample Location	
Sample Description	Stayte Strn.
Sample Matrix	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable					
Arsenic	Extractable mg/L	0.0080	0.0002	0.010	Below MAC
Copper	Extractable mg/L	0.007	0.001	1.0	Below AO
Lead	Extractable mg/L	0.0005	0.0001	0.01	Below MAC
Microbiological Analysis					
Total Coliforms	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Routine Water					
Iron	Extractable mg/L	0.040	0.005	0.3	Below AO
Manganese	Extractable mg/L	0.025	0.001	0.05	Below AO

Analytical Report

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Reference Number	1137814-8
Sample Date	May 16, 2016
Sample Time	08:46
Sample Location	
Sample Description	City Washroom
Sample Matrix	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable					
Arsenic	Extractable mg/L	0.0086	0.0002	0.010	Below MAC
Copper	Extractable mg/L	0.098	0.001	1.0	Below AO
Lead	Extractable mg/L	0.0014	0.0001	0.01	Below MAC
Microbiological Analysis					
Total Coliforms	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Routine Water					
Iron	Extractable mg/L	0.059	0.005	0.3	Below AO
Manganese	Extractable mg/L	0.129	0.001	0.05	Above AO

Analytical Report

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Reference Number	1137814-9
Sample Date	May 16, 2016
Sample Time	07:55
Sample Location	
Sample Description	Roper Prv.
Sample Matrix	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable					
Arsenic	Extractable mg/L	0.0056	0.0002	0.010	Below MAC
Copper	Extractable mg/L	0.002	0.001	1.0	Below AO
Lead	Extractable mg/L	<0.0001	0.0001	0.01	Below MAC
Microbiological Analysis					
Total Coliforms	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Routine Water					
Iron	Extractable mg/L	0.015	0.005	0.3	Below AO
Manganese	Extractable mg/L	0.056	0.001	0.05	Above AO

Analytical Report

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Reference Number	1137814-10
Sample Date	May 16, 2016
Sample Time	09:05
Sample Location	
Sample Description	Merklin Reservoir
Sample Matrix	Drinking Water

Analyte	Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable					
Arsenic	Extractable mg/L	0.0095	0.0002	0.010	Below MAC
Copper	Extractable mg/L	<0.001	0.001	1.0	Below AO
Lead	Extractable mg/L	<0.0001	0.0001	0.01	Below MAC
Microbiological Analysis					
Total Coliforms	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Routine Water					
Iron	Extractable mg/L	0.009	0.005	0.3	Below AO
Manganese	Extractable mg/L	0.124	0.001	0.05	Above AO

Analytical Report

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Reference Number	1137814-11
Sample Date	May 16, 2016
Sample Time	09:20
Sample Location	
Sample Description	Main Shop
Sample Matrix	Drinking Water

Analyte		Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable						
Arsenic	Extractable	mg/L	0.0092	0.0002	0.010	Below MAC
Copper	Extractable	mg/L	0.015	0.001	1.0	Below AO
Lead	Extractable	mg/L	<0.0001	0.0001	0.01	Below MAC
Microbiological Analysis						
Total Coliforms	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Escherichia coli	Enzyme Substrate Test	MPN/100 mL	<1.0	1.0	0 per 100 mL	Below MAC
Routine Water						
Iron	Extractable	mg/L	<0.005	0.005	0.3	Below AO
Manganese	Extractable	mg/L	0.009	0.001	0.05	Below AO

Approved by:



Carol Nam, Dipl. T.
Quality Officer

Data have been validated by Analytical Quality Control and Exova's Integrated Data Validation System (IDVS).

Generation and distribution of the report, and approval by the digitized signature above, are performed through a secure and controlled automatic process.

Methodology and Notes

Bill To: City of White Rock	Project:	Lot ID: 1137814
Report To: City of White Rock	ID:	Control Number: C0092241
877 Keil Street	Name: White Rock Water System	Date Received: May 16, 2016
White Rock, BC, Canada	Location:	Date Reported: May 17, 2016
V4B 4V6	LSD:	Report Number: 2103694
Attn: Greg St Louis	P.O.:	
Sampled By:	Acct code:	
Company:		

Method of Analysis

Method Name	Reference	Method	Date Analysis Started	Location
Metals SemiTrace (Extractable) in water (Surrey)	US EPA	* Metals & Trace Elements by ICP-AES, 6010C	16-May-16	Exova Surrey
Total and E-Coli - Colilert - DW (Surrey)	APHA	Enzyme Substrate Test, APHA 9223 B	16-May-16	Exova Surrey
Trace Metals (extractable) in Water (Surrey)	US EPA	* Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8	16-May-16	Exova Surrey

** Reference Method Modified*

References

APHA	Standard Methods for the Examination of Water and Wastewater
US EPA	US Environmental Protection Agency Test Methods

Guidelines

Guideline Description	Health Canada GCDWQ
Guideline Source	Guidelines for Canadian Drinking Water Quality, Health Canada, October 2014
Guideline Comments	MAC = Maximum Acceptable Concentration AO = Aesthetic Objective OG = Operational Guideline for Water Treatment Plants Refer to Health Canada GCDWQ for complete guidelines and additional drinking water information at www.hc-sc.gc.ca

Comments:

- Temperature of samples on arrival was 7.4 °C.

The comparison of test results to guideline limits is provided for information purposes only. This is not to be taken as a statement of conformance / nonconformance to any guideline, regulation or limit. The data user is responsible for all conclusions drawn with respect to the data and is advised to consult official regulatory references when evaluating compliance.

Please direct any inquiries regarding this report to our Client Services group.
Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.

Project Information

Project ID: _____
 Project Name: White Rock Water System
 Project Location: _____
 Legal Location: _____
 PO/AFE#: _____
 Proj. Acct. Code: _____
 Quote #: _____

Invoice to:

Company: City of White Rock
 Address: 877 Kail Street
White Rock, BC V4B 4V3
 Attention: Greg St Louis
 Phone: (304) 541-2181
 Cell: (304) 787-3283
 Fax: (304) 541-2190
 E-mail: gstlouis@whiterockcity.ca
 Agreement ID: 108828
 Copy of report: _____

Report To:

Company: City of White Rock
 Address: 877 Kail Street
White Rock, BC V4B 4V3
 Attention: Greg St Louis
 Phone: (304) 541-2181
 Cell: (304) 787-3283
 Fax: (304) 541-2190
 E-mail 1: gstlouis@whiterockcity.ca
 E-mail 2: _____
 Copy of invoice: _____

Report Results	Regulatory Requirement
E-Mail	HCDWQG
Mail	Ab Tier 1
Online	SPIGEC
Fax	BCCSR
PDF	Other (list below)
Excel	
QA/QC	

RUSH Priority

Emergency (contact lab for turnaround and pricing)	When "ASAP" is requested, turn around will default to a 100% RUSH priority, with pricing and turn around time to match. Please contact the lab prior to submitting RUSH samples. If not all samples require RUSH, please indicate in the special instructions.
Priority 1-2 working days (100% surcharge)	
Urgent 2-3 working days (50% surcharge)	

Date Required: May 17, 2016 Signature: [Signature]

Special Instructions/Comments (please include contact information including ph. # if different from above).

"UNDER BOIL WATER ADVISORY"

Number of Containers	DW30	ETMN	ETAS	ETPB	ETFE	ETCU
	2	2	2	2	2	2
	2	2	2	2	2	2
	2	2	2	2	2	2
	2	2	2	2	2	2
	2	2	2	2	2	2

Sample Custody (please print)

Sampled by: JUN / AL

Company: CITY OF WHITE ROCK

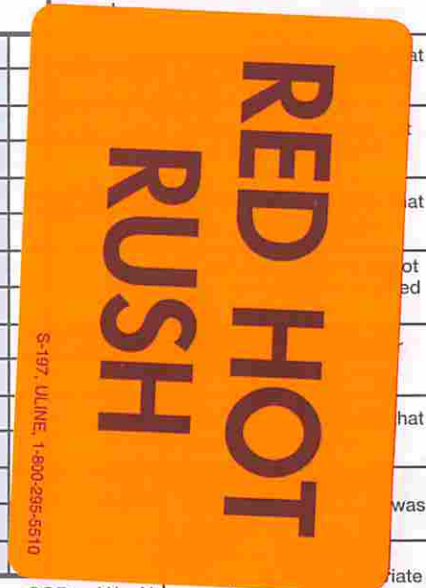
This section for Lab use only

RECU/RECEIVED

Date/Time stamp: 16 -05- 2016
10:30 am

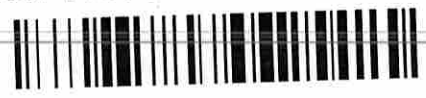
Site I.D.	Sample Description	Depth		Date/Time Sampled	Matrix	Sampling Method	Enter tests above (✓ relevant samples below)						
		start in	end m				DW30	ETMN	ETAS	ETPB	ETFE	ETCU	
1	<u>MANN PARK STN</u>			<u>7:25</u>			2	✓	✓	✓	✓	✓	✓
2	<u>MALABAR STN</u>			<u>7:15</u>			2	✓	✓	✓	✓	✓	✓
3	<u>MARINE DR. STN</u>			<u>7:05</u>			2	✓	✓	✓	✓	✓	✓
4	<u>EVERALL STN</u>			<u>7:38</u>			2	✓	✓	✓	✓	✓	✓
5	<u>RUSSEL AVE. STN</u>			<u>7:47</u>			2	✓	✓	✓	✓	✓	✓
6	<u>STEVEN STN</u>			<u>8:10</u>			2	✓	✓	✓	✓	✓	✓
7	<u>STAYTE STN</u>			<u>8:22</u>			2	✓	✓	✓	✓	✓	✓
8	<u>CITY WASHROOM</u>			<u>8:46</u>			2	✓	✓	✓	✓	✓	✓
9	<u>ROPER PRV</u>			<u>7:55</u>			2	✓	✓	✓	✓	✓	✓
10	<u>MERKLIN RESERVOIR</u>			<u>9:05</u>			2	✓	✓	✓	✓	✓	✓
11	<u>MAIN SHOP</u>			<u>9:20</u>			2	✓	✓	✓	✓	✓	✓
12													
13													
14													
15													

Indicate in the space allotted any deficiencies by the corresponding



Submission of this form acknowledges acceptance of Exova's Standard Terms and Conditions (<http://www.exova.com/about/terms-and-conditions/>)

Lot: 1137814 ^{COC}



Shipping: COD Y/ N container

and size of coolers

Temp. received: 7.4 Delivery Method: A

Received by: [Signature] Waybill: [Signature]

Please indicate any potentially hazardous samples

ED 120-02