

Ruth McDougall

From: OKA Transport 97 Ltd <okatrans@telus.net>
Sent: January 10, 2017 12:22 PM
To: mcdougallr@outlook.com
Subject: FW: Your domestic water tests

Flag Status: Flagged

No 4

From: Brian & Jane Upper [mailto:bjupper@telus.net]
Sent: Saturday, July 30, 2016 1:55 PM
To: okatrans@telus.net
Subject: Your domestic water tests

Hello Doug,

Here are the nitrate readings from your domestic well that you requested. I do not have anything from the MoE after the August /15 reading. The date marked by one asterisk was collected by Stephanie and sent to Maxxim – the dates with the 2 asterisks were collected by Stephanie and sent to the ALS Lab. The rest that I have listed were taken by me except for the last two that were collected by Tony of Western Water Associates. Mine and Tony's were all sent to Caro Lab. As you said, the recent Caro test is likely more accurate than the one taken by Devin related to the collection point.

Dec.3, 2012 – **1.15**; Jan. 29, 2014 – **4.08**; April 9, 2014 – **8.04**; July 14, 2014 – **7.23**; *Mar. 26, 2015 – **9.03**;
June 22, 2015 – **10.2; ** August 26, 2015 – **11.4**; April 7, 2016 – **12.4**; June 1, 2016 – **14.3**;

Jan 2016 8.8

You can see a steady rise in your levels just like SS. Up until the last few tests yours have been slightly lower than ours. You likely have Stephanie's samplings after August 2015 but I don't. Could you forward them to complete my wells file? Both of your wells have sulphates at similar levels to the Hullcar Hall which makes sense because the water flows to your wells from that direction. You may notice a slight odour but it is not a safety thing at this low amount.

Give me a call if you have any more questions.

Brian U.

any more 2016



This email has been checked for viruses by Avast antivirus software.
www.avast.com

from MOE report MOE Memorandum
May 4 2016 to Quista Z-H
By Camie Kenta

26-Mar-15	Maxxam	0.02	9.3	3.32	1.79	2.2	0.0028
21-Apr-15	Maxxam	0.02	9.13	0.796	0.775	1.33	0.0211
20-May-15	Maxxam	0.02		0.678	0.685	2.07	0.0642
22-Jun-15	ALS	0.015		0.0475	0.457	3.31	
20-Jul-15	ALS	0.015					
26-Aug-15	ALS	0.015	8.7	0.281	0.22	6.28	
23-Sep-15	ALS	0.015		0.186	0.117	6.82	

Table 3. Summary of Nitrate-Nitrogen data collected by MOE from Private Wells.

Sampling Date	Analyzing Laboratory	Detection Limit (mg/L)	Private Wells	
			E301113	TBD
			Regher Barn Tap	Reimer Tap
17-Feb-15	Maxxam	0.02	8.64	-
26-Mar-15	Maxxam	0.02	9.03	-
21-Apr-15	Maxxam	0.02	6.89	7.18
20-May-15	Maxxam	0.02	7.97	-
22-Jun-15	ALS	0.015	10.2	-
20-Jul-15	ALS	0.015	-	-
26-Aug-15	ALS	0.015	11.4	-
23-Sep-15	ALS	0.015	-	-

Values in bold exceed the Canadian Drinking Water Guideline of 10 mg/L nitrate-nitrogen.

SAMPLE ANALYTICAL DATA

REPORTED TO PROJECT Steele Springs Waterworks
Analytical Testing

WORK ORDER REPORTED 6010865
Jan-26-16

Analyte	Result / Recovery	Standard / Guideline	MRL / Units Limits	Prepared	Analyzed	Notes
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Sample ID: #1 DR. 86 (6010865-01) [Water] Sampled: Jan-19-16 10:45

Anions

Nitrate as N	8.83	MAC = 10	0.010 mg/L	N/A	Jan-20-16
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Sample ID: #2 Overflow (6010865-02) [Water] Sampled: Jan-19-16 11:00

Anions

Nitrate as N	12.6	MAC = 10	0.010 mg/L	N/A	Jan-20-16
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REPORT NO.
C16204-60001

ACCOUNT NUMBER
05219

A & L Canada Laboratories Inc.

2136 Jetstream Road, London, ON, N5V 3P5 Tel: (519) 457-2575 Fax: (519) 457-2664



TO: EMERALD BAY AG SERVICES
10 MARYS EMERALD BAY ROAD
VERNON, BC V1H 2A7
CANADA
Canada

FOR: DOUG REGHER

ATTN: Doug Macfarlane

Phone: 250-546-3847
Fax: 250-546-3847

CERTIFICATE OF ANALYSIS

PAGE: 1 / 2

PROJECT NO:
PO#:
LAB NUMBER: 2046002
SAMPLE ID: HOUSE TAP

SAMPLE MATRIX: WATER
DATE SAMPLED: NONE GIVEN
DATE RECEIVED: 2016-07-22
DATE REPORTED: 2016-07-25
DATE PRINTED: 2016-07-25

PARAMETER	RESULT	UNIT	DETECTION LIMIT	METHOD REFERENCE
Nitrate - N	12.3	ug/ml	1.0	Automated Colourimetric

* - accredited test

BDL - Below detectable levels

The results of this report relate to the sample submitted and analyzed.



C16204-60001

Results Authorized By:

Haifeng Song, Ph.D., C.Chem. Lab Director

REPORT NO.
C16204-60001

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ACCOUNT NUMBER
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2136 Jetstream Road, London, ON, N5V 3P5 Tel: (519) 457-2575 Fax: (519) 457-2664

TO: EMERALD BAY AG SERVICES
10 MARYS EMERALD BAY ROAD
VERNON, BC V1H 2A7
CANADA
Canada

FOR: DOUG REGHER

ATTN: Doug Macfarlane

Phone: 250-546-3847
Fax: 250-546-3847

CERTIFICATE OF ANALYSIS

PAGE: 2 / 2

PROJECT NO:
PO#:
LAB NUMBER: 2046003
SAMPLE ID: BARN TAP

SAMPLE MATRIX: WATER
DATE SAMPLED: NONE GIVEN
DATE RECEIVED: 2016-07-22
DATE REPORTED: 2016-07-25
DATE PRINTED: 2016-07-25

PARAMETER	RESULT	UNIT	DETECTION LIMIT	METHOD REFERENCE
Nitrate - N	12.6	ug/ml	1.0	Automated Colourimetric

* - accredited test

BDL - Below detectable levels

The results of this report relate to the sample submitted and analyzed.



C16204-60001

Results Authorized By:

Haifeng Song, Ph.D., C.Chem. Lab Director

Twyla Legault
PLNKO

ALS ENVIRONMENTAL ANALYTICAL REPORT

L1815107 CONTD....

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06-SEP-16 16:07 (MT)

Version: FINAL

Sample ID Description Sampled Date Sampled Time Client ID		L1815107-1 Water 16-AUG-16 12:42 E262364_REG				
Grouping	Analyte					
WATER						
Field Tests	EC, Client Supplied (uS/cm)	1037				
	Diss. Oxygen, Client Supplied (mg/L)	.79				
	pH, Client Supplied (pH)	7.3				
Physical Tests	Conductivity (uS/cm)	906				
	Hardness (as CaCO3) (mg/L)	482				
	pH (pH)	7.72				
	Total Dissolved Solids (mg/L)	663				
	Turbidity (NTU)	0.26				
Anions and Nutrients	Alkalinity, Bicarbonate (as CaCO3) (mg/L)	231				
	Alkalinity, Carbonate (as CaCO3) (mg/L)	<1.0				
	Alkalinity, Hydroxide (as CaCO3) (mg/L)	<1.0				
	Alkalinity, Phenolphthalein (as CaCO3) (mg/L)	<2.0				
	Alkalinity, Total (as CaCO3) (mg/L)	231				
	Ammonia, Total (as N) (mg/L)	<0.0050				
	Bromide (Br) (mg/L)	<0.25	DLDS			
	Chloride (Cl) (mg/L)	27.1				
	Fluoride (F) (mg/L)	0.16				
	Nitrate and Nitrite (as N) (mg/L)	17.0				
	Nitrate (as N) (mg/L)	17.0				
	Nitrite (as N) (mg/L)	0.0135				
	Total Kjeldahl Nitrogen (mg/L)	<1.7				
	Total Nitrogen (mg/L)	16.9				
	Total Dissolved Nitrogen (mg/L)	16.5				
	Orthophosphate-Dissolved (as P) (mg/L)	0.0023				
	Phosphorus (P)-Total Dissolved (mg/L)	<0.0020				
	Phosphorus (P)-Total (mg/L)	0.0022				
	Sulfate (SO4) (mg/L)	174				
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	4.11				
	Total Organic Carbon (mg/L)	3.91				
Total Metals (Undigested)	Aluminum (Al)-Total (mg/L)	0.00044				
	Antimony (Sb)-Total (mg/L)	0.000168				
	Arsenic (As)-Total (mg/L)	0.000248				
	Barium (Ba)-Total (mg/L)	0.0910				
	Beryllium (Be)-Total (mg/L)	<0.000010				
	Bismuth (Bi)-Total (mg/L)	<0.0000050				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

SAMPLE ANALYTICAL DATA

REPORTED TO PROJECT Steele Springs Waterworks
Analytical Testing

WORK ORDER REPORTED 6110326
2016-11-10

Analyte	Result / Recovery	Standard / Guideline	MRL / Limits	Units	Prepared	Analyzed	Notes
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Sample ID: #1 Pumphouse (6110326-01) [Water] Sampled: 2016-11-03 09:30

Anions

Nitrate (as N)	10.1	MAC = 10	0.010	mg/L	N/A	2016-11-04
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Sample ID: #2 DR 86 (6110326-02) [Water] Sampled: 2016-11-03 10:00

Anions

Nitrate (as N)	11.3	MAC = 10	0.010	mg/L	N/A	2016-11-04
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Sample ID: #3 North Spring (6110326-03) [Water] Sampled: 2016-11-03 10:40

Anions

Nitrate (as N)	26.7	MAC = 10	0.010	mg/L	N/A	2016-11-04
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SAMPLE ANALYTICAL DATA

REPORTED TO PROJECT Steele Springs Waterworks
Analytical Testing

WORK ORDER 6120065
REPORTED 2016-12-13

Analyte	Result / Recovery	Standard / Guideline	MRL / Units Limits	Prepared	Analyzed	Notes
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Sample ID: #1 Pumphouse (6120065-01) [Water] Sampled: 2016-11-30 12:45

Anions

Nitrate (as N)	11.1	MAC = 10	0.010 mg/L	N/A	2016-12-02	
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Sample ID: #2 D.R. 86 (6120065-02) [Water] Sampled: 2016-11-30 13:00

Anions

Nitrate (as N)	14.9	MAC = 10	0.010 mg/L	N/A	2016-12-02	
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