

Appendix G
Groundwater Sampling Letter



Environmental Assessments & Approvals

July 9, 2019

AEC 18-107

Township of Springwater
2231 Nursery Road
Springwater, ON
L0L 1Y2

Attention: Mr. Robert Brindley,
Chief Administration Officer

Re: **Supplemental Ground Water Sample Results for Phase Two Environmental
Site Assessment for 1132 Snow Valley Road Springwater, ON**

Dear Mr. Brindley:

This letter presents the supplemental ground water sampling requested for the Phase Two Environmental Site Assessment (ESA) at 1132 Snow Valley Road, Springwater (the "Site" or the "RSC Property"). Ground water exceedances of the Provincial Standards were originally reported in the Phase Two ESA report issued February 7, 2019 (Azimuth, 2019) which were attributed to entrained sediments in the initial ground water samples. At the request of the client, selective locations where ground water exceedances had been detected were re-sampled for specific parameters (*i.e.*, petroleum hydrocarbons [PHCs] and volatile organic compounds [VOCs]). For complete understanding, this supplemental letter should be read in conjunction with the original Phase Two ESA Report (Azimuth, 2019).

The Ministry of the Environment, Conservation and Parks (MECP) has stated when addressing anomalous exceedances of a Standard that anomalous detections of a chemical parameter greater than the Standard do not necessarily lead to a conclusion that an exceedance has occurred at the Site. The MECP goes on to state that if the parameter is a "contaminant of concern (COC)", the MECP will ask for additional effort through sampling to confirm this theory. In the case of ground water, two supplemental samples would generally be expected that meet the Standard (not within any set timelines). Finally, the MECP indicates that the sampling findings are to be documented in the Conceptual Site Model (CSM) and more detail is to be provided in the Phase Two ESA report.



This supplemental sampling program is being conducted to conform to MECP requirements under the Brownfield legislation (*i.e.*, O.Reg. 153/04 [as amended]). Azimuth Environmental Consulting, Inc. (Azimuth) completed two supplemental rounds of ground water sampling on May 28 and June 26, 2019.

The two locations selected for re-sampling were MW1 which was located along the central tract, approximately 150 m north of the south gate situated along Snow Valley Road (see Figure 3, [Appendix A - Azimuth, 2019]). This location encountered a very permeable cobble zone and was drilled through this feature to the underlying aquifer system. Measureable concentrations of benzene exceeded generic Site Condition Standards¹ (SCS) at this location from sampling events outlined in the Phase Two ESA Report (Azimuth, 2019). The second sample location (MW4) was situated at the southeast corner of the RSC Property (*i.e.*, at the intersection of Snow Valley Road and Bayfield Street North). This location was drilled and instrumented to determine if impacts were evident from a “significant” PHC plume originating from historic retail gasoline station release located at 1179 Bayfield Street North. Measurable concentrations of PHC F₃ had originally exceeded the generic SCS at this location.

For explanation on background details, the methodology associated with the sampling analysis plan, and the Site Conceptual Model (SCM); the Phase Two ESA Report (Azimuth, 2019) is to be referenced.

The results from the supplemental sampling program continue to detect the presence of PHC /VOC parameters in the deep aquifer system at the RSC Property (*i.e.*, MW1). In contrast, no parameter measurements above the analytical detection limits were found at MW4 (see revised Tables 6 and 7 and attached analytical data).

The May 2019 analytical results reported a measureable concentration of toluene (0.8 µg/L) at ground water monitor MW1; which is below the applicable Provincial Standards. No other parameter measurements were reported above the analytical detection limits. There were no measureable detections reported above the analytical detection limits from the MW4 sample collected during the May 2019 sampling event. The June 2019 analytical results reported no measureable concentrations of PHC and VOC parameters above the analytical detection limits for the ground water samples collected from MW1 and MW4.

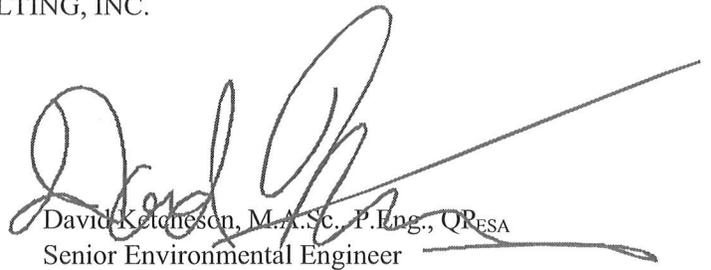
¹ Soil, ground water and sediment standards for use under Part XV.1 of the *Environmental Protection Act*, dated April 15, 2011 [as amended])



In our opinion, the supplemental sampling results confirm the conclusions presented in the Phase Two ESA Report (Azimuth, 2019). If you have any questions regarding the information presented in this report, please do not hesitate to contact me should you have any questions.

Yours truly,
AZIMUTH ENVIRONMENTAL CONSULTING, INC.


Ian Acheson, B.Sc.
Environmental Scientist


David Ketcheson, M.A.Sc., P.Eng., QRESA
Senior Environmental Engineer

Attach

M:\18 Projects\18-107 Hasty Tract EA\05.0 - Reporting\05.3 - Phase II ESA\05.4 - Post Submission - Supplement Sampling
Program\190705 - 18-107 - Supplemental Sampling Results Letter - Issued.docx



ATTACHMENTS

Attachment A: Revised Report Tables
Attachment B: Supplemental Laboratory Analytical Reports



ATTACHMENT A

Revised Report Tables

Table 1

Well Information and Water Level Measurements

PROJECT NO: 18-107												
Well Name	Well Depth (m btoc)	Stickup (m ags)	Well Depth (m bgs)	Screened Interval (m bgs)	Ground Elevation* (m rtd)	Casing Elevation* (m rtd)	Date (d-m-y)	Water Level (m btoc)	Water Level (m bgs)	Water Level (m rtd)		
MW-1	53.37	0.83	52.54	51.0 - 52.5	239.87	240.70	04-Jun-18 30-Aug-18	12.41 12.81	11.58 11.98	228.3 227.9		
MW-2	31.90	0.92	30.98	28.9 - 31.9	239.78	240.70	28-May-19 26-Jun-19	12.53 12.46	11.70 11.63	228.2 228.2		
MW-4	12.81	1.05	11.76	8.8 - 12.8	239.15	240.20	08-Jun-18 30-Aug-18	10.84 11.09	9.92 10.17	229.9 229.6		
MW-5	35.85	0.91	34.94	32.8 - 35.8	240.59	241.50	13-Jun-18 30-Aug-18	10.18 10.50	9.13 9.45	230.0 229.7		
MW-6	19.92	0.96	18.96	18.4 - 19.9	240.44	241.40	28-May-19 26-Jun-19	10.22 10.16	9.17 9.11	230.0 230.0		
MW-7	35.58	0.89	34.69	32.5 - 35.5	240.31	241.20	15-Jun-18 30-Aug-18	10.53 11.90	9.62 10.99	231.0 229.6		
MW-8	22.57	0.98	21.59	21.1 - 22.6	240.22	241.20	18-Jun-18 30-Aug-18	11.87 12.05	10.91 11.09	229.5 229.4		
MW-10	12.10	0.87	11.23	9.1 - 12.1	239.03	239.90	21-Jun-18 30-Aug-18	8.51 12.07	7.62 11.18	232.7 229.1		
MW-11	13.03	0.95	12.08	10.0 - 13.0	239.25	240.20	25-Jun-18 30-Aug-18	12.25 13.29	11.27 12.31	229.0 227.9		
MW-12	12.29	0.92	11.37	9.3 - 12.3	239.58	240.50	26-Jun-18 30-Aug-18	10.99 10.62	10.12 9.70	228.9 229.9		
MW-13	11.39	0.93	10.46	8.4 - 11.4	239.17	240.10	27-Jun-18 30-Aug-18	11.16 10.30	10.29 9.37	228.7 229.8		

NOTES:

- m btoc - metres below top of casing
- m bgs - metres below ground surface
- m ags - metres above ground surface
- not applicable

*wells and ground surface surveyed Sept 12, 2018 by Rudy Mac Surveying Ltd.

Table 6

Ground Water Quality Analytical Results: TPH

PROJECT NO: 18-107

Borehole Number and Sample ID	Sampling Date (d-m-y)	Analytical Reference Number	F ₁ (C ₆ to C ₁₀) minus BTEX				
			F ₁ (C ₆ to C ₁₀) (µg/L)	F ₁ (C ₆ to C ₁₀) (µg/L)	F ₂ (C ₁₀ to C ₁₆) (µg/L)	F ₃ (C ₁₆ to C ₃₄) (µg/L)	F ₄ (C ₃₄ to C ₅₀) (µg/L)
Table 1 (O.Reg. 153/04*)			420	150	500	500	
Table 2 (O.Reg. 153/04**)			750	150	500	500	
MW-1	04-Jun-18	9300611	27	<25	<100	<100	<100
	28-May-19	B19-15031-1	< 50	---	< 50	< 400	< 400
	26-Jun-19	B19-19024-1	< 50	< 50	< 50	< 400	< 400
	DUP	B19-19024-3	< 50	< 50	< 50	< 400	< 400
MW-4	13-Jun-18	9326094	<25	<25	<100	910	220
	30-Aug-18	9516357	<25	<25	<100	240	<100
	28-May-19	B19-15031-2	< 50	---	< 50	< 400	< 400
	DUP	B19-15031-3	< 50	---	< 50	< 400	< 400
	26-Jun-19	B19-19024-2	< 50	< 50	< 50	< 400	< 400
MW-10 MW-10-1	26-Jun-18	9360010	<25	<25	<100	<100	<100
	DUP	9360012	<25	<25	<100	<100	<100
	30-Aug-18	9516363	<25	<25	<100	<100	<100
MW-11	26-Jun-18	9365477	<25	<25	<100	140	<100
	30-Aug-18	9516364	<25	<25	<100	<100	<100
MW-12	26-Jun-18	9365486	<25	<25	<100	<100	<100
	30-Aug-18	9516365	<25	<25	<100	<100	<100
MW-13	26-Jun-18	9365495	<25	<25	<100	190	<100
	30-Aug-18	9516366	<25	<25	<100	<100	<100

Notes: Numbers rounded for presentation purposes

--- denotes not reported

1. * denotes O.Reg. 153/04 Table 8 soil standards for residential/ parkland/ institutional/ industrial/ commercial/ community

2. ** denotes O.Reg. 153/04 Table 2 soil standards for coarse grained soil for resident/ parkland/ institutional property use.

3. Green shading indicate parameters with a measurable value.

4. Orange shading indicate parameters above Table 8 guidelines.

5. Red shading indicate parameters above Table 2 guidelines.



ATTACHMENT B

Supplemental Laboratory Analytical Reports

C.O.C.: G76189

REPORT No. B19-15031

Report To:

Azimuth Environmental
 647 Welham Rd,
 Barrie ON L4N9A1 Canada

Attention: Ian Acheson

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 28-May-19

JOB/PROJECT NO.: Hasty Track

DATE REPORTED: 03-Jun-19

SAMPLE MATRIX: Groundwater

P.O. NUMBER: 18-107

WATERWORKS NO.

Parameter	Qty	Site Analyzed	Analyst Initials	Date Analyzed	Lab Method	Reference Method
PHC(F2-F4)	3	Kingston	KPR	31-May-19	C-PHC-W-001 (k)	MOE E3421
VOC's	4	Richmond Hill	JE	29-May-19	C-VOC-02 (rh)	EPA 8260
PHC(F1)	4	Richmond Hill	JE	29-May-19	C-VPHW-01 (rh)	MOE E3421

O. Reg. 153 - Soil, Ground Water and Sediment Standards
 Tbl. 2 - PGW - Table 2 - Potable Ground Water



Christine Burke
 Lab Manager

R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an *

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

C.O.C.: G76189

REPORT No. B19-15031

Report To:

Azimuth Environmental
 647 Welham Rd,
 Barrie ON L4N9A1 Canada

Attention: Ian Acheson

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 28-May-19

DATE REPORTED: 03-Jun-19

SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.: Hasty Track

P.O. NUMBER: 18-107

WATERWORKS NO.

Parameter	Units	R.L.	Client I.D.	MW1	MW4	MW4-101	Trip Blank	O. Reg. 153	
			Sample I.D.	B19-15031-1	B19-15031-2	B19-15031-3	B19-15031-4	Tbl. 2 -	PGW
			Date Collected	28-May-19	28-May-19	28-May-19	28-May-19		
Acetone	µg/L	30		< 30	< 30	< 30	< 30	2700	
Benzene	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	5	
Bromodichloromethane	µg/L	2		< 2	< 2	< 2	< 2	16	
Bromoform	µg/L	5		< 5	< 5	< 5	< 5	25	
Bromomethane	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	0.89	
Carbon Tetrachloride	µg/L	0.2		< 0.2	< 0.2	< 0.2	< 0.2	0.79	
Monochlorobenzene (Chlorobenzene)	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	30	
Chloroform	µg/L	1		< 1	< 1	< 1	< 1	2.4	
Dibromochloromethane	µg/L	2		< 2	< 2	< 2	< 2	25	
Dichlorobenzene, 1,2-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	3	
Dichlorobenzene, 1,3-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	59	
Dichlorobenzene, 1,4-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	1	
Dichlorodifluoromethane	µg/L	2		< 2	< 2	< 2	< 2	590	
Dichloroethane, 1,1-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	5	
Dichloroethane, 1,2-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Dichloroethylene, 1,1-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Dichloroethene, cis-1,2-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Dichloroethene, trans-1,2-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Dichloropropane, 1,2-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	5	
Dichloropropene, cis-1,3-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5		
Dichloropropene, trans-1,3-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5		

O. Reg. 153 - Soil, Ground Water and Sediment Standards
 Tbl. 2 - PGW - Table 2 - Potable Ground Water



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 Lab Manager

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 Barrie ON L4N9A1 Canada

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

Attention: Ian Acheson

DATE RECEIVED: 28-May-19

JOB/PROJECT NO.: Hasty Track

DATE REPORTED: 03-Jun-19

P.O. NUMBER: 18-107

SAMPLE MATRIX: Groundwater

WATERWORKS NO.

Parameter	Client I.D.		MW1	MW4	MW4-101	Trip Blank	O. Reg. 153	
	Sample I.D.	Date Collected	B19-15031-1 28-May-19	B19-15031-2 28-May-19	B19-15031-3 28-May-19	B19-15031-4 28-May-19	Tbl. 2 - PGW	
Dichloropropene 1,3-cis+trans	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.5	
Ethylbenzene	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	2.4	
Dibromoethane, 1,2- (Ethylene Dibromide)	µg/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.2	
Hexane	µg/L	5	< 5	< 5	< 5	< 5	51	
Methyl Ethyl Ketone	µg/L	20	< 20	< 20	< 20	< 20	1800	
Methyl Isobutyl Ketone	µg/L	20	< 20	< 20	< 20	< 20	640	
Methyl-t-butyl Ether	µg/L	2	< 2	< 2	< 2	< 2	15	
Dichloromethane (Methylene Chloride)	µg/L	5	< 5	< 5	< 5	< 5	50	
Styrene	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	5.4	
Tetrachloroethane, 1,1,1,2-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.1	
Tetrachloroethane, 1,1,2,2-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1	
Tetrachloroethylene	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Toluene	µg/L	0.5	0.8	< 0.5	< 0.5	< 0.5	24	
Trichloroethane, 1,1,1-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	200	
Trichloroethane, 1,1,2-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	4.7	
Trichloroethylene	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Trichlorofluoromethane	µg/L	5	< 5	< 5	< 5	< 5	150	
Vinyl Chloride	µg/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	
Xylene, m,p-	µg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Xylene, o-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5		

O. Reg. 153 - Soil, Ground Water and Sediment Standards
 Tbl. 2 - PGW - Table 2 - Potable Ground Water



Christine Burke
 Lab Manager

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 647 Welham Rd,
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Attention: Ian Acheson

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 28-May-19

DATE REPORTED: 03-Jun-19

SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.: Hasty Track

P.O. NUMBER: 18-107

WATERWORKS NO.

Parameter	Units	R.L.	Client I.D.	MW1	MW4	MW4-101	Trip Blank	O. Reg. 153	
			Sample I.D.	B19-15031-1	B19-15031-2	B19-15031-3	B19-15031-4	Tbl. 2 -	PGW
			Date Collected	28-May-19	28-May-19	28-May-19	28-May-19		
Xylene, m,p,o-	µg/L	1.1		< 1.1	< 1.1	< 1.1	< 1.1	Xyl	300
PHC F1 (C6-C10)	µg/L	50		< 50	< 50	< 50	< 50	PHC	750 (C6-C10)
PHC F2 (>C10-C16)	µg/L	50		< 50	< 50	< 50		PHC	150 (>C10-C16)
PHC F3 (>C16-C34)	µg/L	400		< 400	< 400	< 400		PHC	500 (>C16-C34)
PHC F4 (>C34-C50)	µg/L	400		< 400	< 400	< 400		PHC	500 (>C34-C50)

O. Reg. 153 - Soil, Ground Water and Sediment Standards
 Tbl. 2 - PGW - Table 2 - Potable Ground Water



Christine Burke
 Lab Manager

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Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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Attention: Ian Acheson

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112 Commerce Park Drive
Barrie ON L4N 8W8
Tel: 705-252-5743
Fax: 705-252-5746

DATE RECEIVED: 28-May-19

DATE REPORTED: 03-Jun-19

SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.: Hasty Track

P.O. NUMBER: 18-107

WATERWORKS NO.

Summary of Exceedances

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - PGW - Table 2 - Potable Ground Water



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Lab Manager

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TESTING REQUIREMENTS
 O.Reg 153 Table 2
 Surface Soil Sub Surface Soil (O.Reg 153)
 Yes No Record of Site Condition (O.Reg 153)
 Provincial Water Quality Objectives
 Sewer Use By-Law.

REPORT NUMBER (Lab Use)
B19-15031

Are any samples to be submitted intended for Human Consumption under any Drinking Water Regulations? Yes No (If yes, submit all Drinking Water Samples on a Drinking Water Chain of Custody)

Indicate Laboratory Samples are submitted to: Kingston Ottawa Richmond Hill Windsor Barrie London

Organization: Armstrong Env
 Contact: Jan Acheson
 Tel: (905) 331-6677
 Fax:
 Email: jachson@armstrongenvironmental.com
 Quote No.: Hosty Track
 P.O. No.: 18-107
 Address and Invoicing Address (if different): 642 Welham Rd Barrie, ON

Project Name: Hosty Track
 Additional Info: PKC #100
 Suspected Highly Contaminated:

Lab No.	Sample Identification	S.P.L.	Sample Matrix	Date Collected (yy-mm-dd)	Time Collected	Indicate Test For Each Sample By Using A Check Mark In The Box Provided	pH	Temp.	# Bottles Sample	Field Filtered (Y/N)
1	MW1		GW	19-05-28	10:45		9.10	8.8	3	N
2	MW4		GW	19-05-28	11:15		8.25	10.3	3	N
3	MW4-101		GW	19-05-28	11:15		8.25	10.3	3	N
4	Trip Blank		-	19-05-28	11:30		-	-	2	N

SAMPLE SUBMISSION INFORMATION
 Submitted by: Jan Acheson
 Date (yy-mm-dd)/Time: 19-05-28

SHIPPING INFORMATION
 Client's Courier:
 Caduceon's Courier:
 Drop Off:
 Caduceon (Pick-up):
 # of Pieces: 1

REPORTING / INVOICING
 Report by Fax:
 Report by Email:
 Invoice by Email:
 Invoice by Mail:

SAMPLE RECEIVING INFORMATION (LABORATORY USE ONLY)
 Received By (print): S.F.E.L. Signature: [Signature]
 Date Received (yy-mm-dd): 19-05-28 Time Received: 11:37
 Laboratory Prepared Bottles: Yes No
 Sample Temperature °C: 10.5
 Labeled by: AP
 Page 1 of 1
 G 76189

Comments:

C.O.C.: G81714

REPORT No. B19-19024

Report To:

Azimuth Environmental
 642 Welham Rd,
 Barrie ON L4N9A1 Canada

Attention: Ian Acheson

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 26-Jun-19

JOB/PROJECT NO.: Hasty Track

DATE REPORTED: 03-Jul-19

SAMPLE MATRIX: Groundwater

P.O. NUMBER: 18-107

WATERWORKS NO.

Parameter	Qty	Site Analyzed	Analyst Initials	Date Analyzed	Lab Method	Reference Method
PHC(F2-F4)	3	Kingston	KPR	28-Jun-19	C-PHC-W-001 (k)	MOE E3421
VOC's	4	Richmond Hill	JE	27-Jun-19	C-VOC-02 (rh)	EPA 8260
PHC(F1)	4	Richmond Hill	JE	27-Jun-19	C-VPHW-01 (rh)	MOE E3421

O. Reg. 153 - Soil, Ground Water and Sediment Standards
 Tbl. 2 - PGW - Table 2 - Potable Ground Water



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 Lab Manager

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 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 26-Jun-19

DATE REPORTED: 03-Jul-19

SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.: Hasty Track

P.O. NUMBER: 18-107

WATERWORKS NO.

Parameter	Client I.D.		MW 1	MW 4	MW 1-101	Trip Blank	O. Reg. 153	
	Sample I.D.	Date Collected	B19-19024-1 26-Jun-19	B19-19024-2 26-Jun-19	B19-19024-3 26-Jun-19	B19-19024-4 26-Jun-19	Tbl. 2 - PGW	
Acetone	µg/L	30	< 30	< 30	< 30	< 30	2700	
Benzene	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	5	
Bromodichloromethane	µg/L	2	< 2	< 2	< 2	< 2	16	
Bromoform	µg/L	5	< 5	< 5	< 5	< 5	25	
Bromomethane	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.89	
Carbon Tetrachloride	µg/L	0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.79	
Monochlorobenzene (Chlorobenzene)	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	30	
Chloroform	µg/L	1	< 1	< 1	< 1	< 1	2.4	
Dibromochloromethane	µg/L	2	< 2	< 2	< 2	< 2	25	
Dichlorobenzene,1,2-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	3	
Dichlorobenzene,1,3-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	59	
Dichlorobenzene,1,4-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1	
Dichlorodifluoromethane	µg/L	2	< 2	< 2	< 2	< 2	590	
Dichloroethane,1,1-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	5	
Dichloroethane,1,2-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Dichloroethylene,1,1-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Dichloroethene, cis-1,2-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Dichloroethene, trans-1,2-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Dichloropropane,1,2-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	5	
Dichloropropene, cis-1,3-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5		
Dichloropropene, trans- 1,3-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5		

O. Reg. 153 - Soil, Ground Water and Sediment Standards
 Tbl. 2 - PGW - Table 2 - Potable Ground Water



Christine Burke
 Lab Manager

R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an *

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

C.O.C.: G81714

REPORT No. B19-19024

Report To:

Azimuth Environmental
 642 Welham Rd,
 Barrie ON L4N9A1 Canada

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

Attention: Ian Acheson

DATE RECEIVED: 26-Jun-19

JOB/PROJECT NO.: Hasty Track

DATE REPORTED: 03-Jul-19

P.O. NUMBER: 18-107

SAMPLE MATRIX: Groundwater

WATERWORKS NO.

Parameter	Units	R.L.	Client I.D.	MW 1	MW 4	MW 1-101	Trip Blank	O. Reg. 153	
			Sample I.D.	B19-19024-1	B19-19024-2	B19-19024-3	B19-19024-4	Tbl. 2 -	PGW
			Date Collected	26-Jun-19	26-Jun-19	26-Jun-19	26-Jun-19		
Dichloropropene 1,3-cis+trans	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	0.5	
Ethylbenzene	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	2.4	
Dibromoethane,1,2-(Ethylene Dibromide)	µg/L	0.2		< 0.2	< 0.2	< 0.2	< 0.2	0.2	
Hexane	µg/L	5		< 5	< 5	< 5	< 5	51	
Methyl Ethyl Ketone	µg/L	20		< 20	< 20	< 20	< 20	1800	
Methyl Isobutyl Ketone	µg/L	20		< 20	< 20	< 20	< 20	640	
Methyl-t-butyl Ether	µg/L	2		< 2	< 2	< 2	< 2	15	
Dichloromethane (Methylene Chloride)	µg/L	5		< 5	< 5	< 5	< 5	50	
Styrene	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	5.4	
Tetrachloroethane,1,1,1,2-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	1.1	
Tetrachloroethane,1,1,2,2-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	1	
Tetrachloroethylene	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Toluene	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	24	
Trichloroethane,1,1,1-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	200	
Trichloroethane,1,1,2-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	4.7	
Trichloroethylene	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5	1.6	
Trichlorofluoromethane	µg/L	5		< 5	< 5	< 5	< 5	150	
Vinyl Chloride	µg/L	0.2		< 0.2	< 0.2	< 0.2	< 0.2	0.5	
Xylene, m,p-	µg/L	1.0		< 1.0	< 1.0	< 1.0	< 1.0		
Xylene, o-	µg/L	0.5		< 0.5	< 0.5	< 0.5	< 0.5		

O. Reg. 153 - Soil, Ground Water and Sediment Standards
 Tbl. 2 - PGW - Table 2 - Potable Ground Water



Christine Burke
 Lab Manager

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 Barrie ON L4N9A1 Canada

Attention: Ian Acheson

Caduceon Environmental Laboratories

112 Commerce Park Drive
 Barrie ON L4N 8W8
 Tel: 705-252-5743
 Fax: 705-252-5746

DATE RECEIVED: 26-Jun-19

DATE REPORTED: 03-Jul-19

SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.: Hasty Track

P.O. NUMBER: 18-107

WATERWORKS NO.

Parameter	Client I.D.		MW 1	MW 4	MW 1-101	Trip Blank	O. Reg. 153	
	Sample I.D.	Date Collected	B19-19024-1	B19-19024-2	B19-19024-3	B19-19024-4	Tbl. 2 -	PGW
Xylene, m,p,o-	µg/L	1.1	< 1.1	< 1.1	< 1.1	< 1.1	300	
PHC F1 (C6-C10)	µg/L	50	< 50	< 50	< 50	< 50	750	
PHC F1 - BTEX	µg/L	50	< 50	< 50	< 50	< 50	750	
PHC F2 (>C10-C16)	µg/L	50	< 50	< 50	< 50		150	
PHC F3 (>C16-C34)	µg/L	400	< 400	< 400	< 400		500	
PHC F4 (>C34-C50)	µg/L	400	< 400	< 400	< 400		500	

O. Reg. 153 - Soil, Ground Water and Sediment Standards
 Tbl. 2 - PGW - Table 2 - Potable Ground Water



Christine Burke
 Lab Manager

R.L. = Reporting Limit

Test methods may be modified from specified reference method unless indicated by an *

Site Analyzed=K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill,B-Barrie

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Tel: 705-252-5743
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DATE RECEIVED: 26-Jun-19

DATE REPORTED: 03-Jul-19

SAMPLE MATRIX: Groundwater

JOB/PROJECT NO.: Hasty Track

P.O. NUMBER: 18-107

WATERWORKS NO.

Summary of Exceedances

O. Reg. 153 - Soil, Ground Water and Sediment Standards
Tbl. 2 - PGW - Table 2 - Potable Ground Water



Christine Burke
Lab Manager

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TESTING REQUIREMENTS

- O.Reg 153
- Surface Soil
- Yes No
- Provincial Water Quality Objectives
- Sewer Use By-Law
- Table 2
- Medium/Fine Coarse
- Sub Surface Soil (O.Reg 153)
- Record of Site Condition (O.Reg 153)
- MISA Guidelines
- O.Reg 558 Leachate Analysis Disposal Site:
- Landfill Monitoring
- Other:

REPORT NUMBER: (Lab Use)

B19-19024

Are any samples to be submitted intended for Human Consumption under any Drinking Water Regulations? Yes No (if yes, submit all Drinking Water Samples on a Drinking Water Chain of Custody)

Indicate Laboratory Samples are submitted to: Kingston Ottawa Windsor Barrie London

Organization: Azimuth Env

Contact: Jan Acheson

Tel:

Fax:

Quote No.:

P.O. No.:

Email: jachson@azimuthenvironmental.com

Address and Invoicing Address (if different): 642 Welham Rd Barrie, ON

Project Name: Hasty Track

Additional Info: 18-107

Sample Matrix Legend: WW=Waste Water, SW=Surface Water, GW=Groundwater, LS=Liquid Sludge, SS=Solid Sludge, S=Soil, Sed=Sediment, PC=Paint Chips, F=Filter, OI=Oil

Lab No.	Sample Identification	S.P.L.	Sample Matrix*	Date Collected (yy-mm-dd)	Time Collected	Indicate Test For Each Sample By Using A Check Mark In The Box Provided	HAZ		# Bottles Sample	Field Filtered(Y/N)	
							pH	Temp.			
	MW1		GW	19-06-26	10:00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	9.08	14.8	3	N
	MW4		GW	19-06-26	10:20	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8.25	13.2	3	↓
	MW1-101		GW	19-06-26	10:00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	9.08	14.8	3	↓
	Tr.p Blank		-	19-06-26	10:25	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	2	N

ANALYSES REQUESTED (Print Test in Boxes)

Platinum 200% Surcharge**

Gold 100% Surcharge

Silver 50% Surcharge

Bronze 25% Surcharge

Standard 5-7 days

Specific Date: _____

Suspected Highly Contaminated

TURNAROUND SERVICE REQUESTED (see back page)

REPORTING / INVOICING

Report by Fax

Report by Email

Invoice by Email

Invoice by Mail

Shipping Information

Client's Courier

Caduceon's Courier

Drop Off

Caduceon (Pick-up)

of Pieces 1

Sample Submission Information

Submitted by: Jan Acheson

Date (yy-mm-dd) / Time: 19-06-26 11:32

Received By (print): S.Feel Signature: S.Feel

Date Received (yy-mm-dd): 19/06/26 Time Received: 11:32

Laboratory Prepared Bottles: Yes No

Sample Temperature °C: 19.1

Labeled by: SF

Page 8 of 14

Comments: Vials 7PH 500mL PK