



Environmental

Geotechnical

Building Sciences

Construction Testing  
& Inspection

**Telephone**

(866) 217.7900  
(705) 742.7900

**Facsimile**

(705) 742.7907

**Website**

[cambium-inc.com](http://cambium-inc.com)

**Mailing Address**

P.O. Box 325,  
Peterborough, Ontario  
Canada, K9J 6Z3

**Locations**

Peterborough  
Kingston  
Barrie  
Ottawa  
Whitby

**Laboratory**

Peterborough



March 24, 2025

Redeemed Christian Church of God, Chapel of Grace  
74 Colonnade Rd N  
Nepean, Ontario

Attn: Oludare Ayeni  
Senior Pastor

**Re: 912 David Manchester Road, Ottawa  
Drinking Water Quality and Treatment Assessment  
Cambium Reference: 22068-001**

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Dear Oludare Ayeni,

The Redeemed Christian Church of God, Chapel of Grace (Client) retained Cambium Inc. (Cambium) to provide a drinking water quality and treatment assessment for the property with a civic address of 912 David Manchester Road, Ottawa, Ontario (the Site).

Cambium understands the Client wishes to rezone the Site and, as part of the application, the City of Ottawa requires a Hydrogeological and Terrain Analysis Report. Cambium further understands that a preliminary investigation of the Site undertaken by Patterson Group reported several of the supply well samples exceeded the City of Ottawa and provincial drinking water quality guidelines.

### **SUPPLY WELL RECORD**

A well record was provided to Cambium (attached) identified with Tag # A395664. Based on the well record, the drilled well was constructed in December 2023 through 1.8 m of sand and clay overlying varying limestone to a depth of 54.9 m below ground surface (mbgs). The sealed casing extends to a depth of 12.2 mbgs with open hole to the final depth. Water was reported to be found at 22.3 mbgs and 52.7 mbgs with a recommended pump rate of 37.9 L/min.

### **WATER QUALITY RESULTS**

Cambium was provided water quality sample results from three samples collected from the on-site supply well (TW1) on January 18, 2024. The laboratory certificates of analysis are attached. The analysis included a general set of



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parameters typical for initial assessments of groundwater. The parameters of interest are summarized below.

**Table 1 Raw Water Analysis Parameter Values of Interest**

Sample	Parameter	Value	ODWQS Criteria Limit	Criteria	Notes
GW1	Fluoride	1.86 mg/L	1.5 / 2.4 mg/L	MAC	See Note 7 below
GW2		1.74 mg/L			
GW1	Colour	236 TCU	5 TCU	AO	Attributed to sulfide
GW2		74 TCU			
GW3		15 TCU			
GW1	Sulfide	10.0 mg/L	0.05 mg/L	AO	Oxidation and filtration required
GW2		8.45 mg/L			
GW1	Total Dissolved Solids	543 mg/L	500 mg/L	AO	May affect taste
GW2		543 mg/L			
GW1	Turbidity	49.0 mg/L	5 mg/L	AO	Attributed to inorganic particulate. Filtration required
GW2		41.7 mg/L			
GW3		38.3 mg/L			
GW1	Hardness	239 mg/L	80-100 mg/L	OG	May cause scaling. Softening required
GW2		260 mg/L			
GW1	Aluminum	0.50 mg/L	0.1 mg/L	OG	May contribute to colour. Cation exchange (Softener) or Reverse Osmosis
GW2		0.24 mg/L			
GW1	Iron	0.42 mg/L	0.3 mg/L	AO	May contribute to colour and turbidity.
GW2		0.16 mg/L			
GW1	Sodium	107 mg/L	20 / 200 mg/L	MAC/ AO	See Note 8 Below
GW2		102 mg/L			

1. ODWQS : Ontario Drinking Water Quality Standard
2. AO : Aesthetic Objective
3. OG : Operational Guideline
4. NTU : Nephelometric Turbidity Units
5. TCU : True Colour Units
6. MAC : Maximum Acceptable Concentration
7. Where supplies contain naturally occurring fluoride at levels higher than 1.5 mg/L but less than 2.4 mg/L the Ministry of Health and Long Term Care recommends an approach through local boards of health to raise public and professional awareness to control excessive exposure to fluoride from other sources.
8. The aesthetic objective for sodium in the ODWQS is 200 mg/L such that select people may taste sodium upon consumption. The ODWQS recognizes that sodium intake through drinking water is a small fraction of that consumed in a normal diet. Where persons require a sodium restricted diet, the intake of sodium in drinking water can become significant and therefore it is recommended that the Health Unit be notified if the concentration exceeds 20 mg/L in the treated water

The primary parameters of concern include turbidity and colour which are attributed to the presence of sulfide, and to a lesser extent iron. A conventional chemical oxidation system consisting of sodium hypochlorite (chlorination) or



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hydrogen peroxide followed by filtration is typical to address the turbidity, colour, sulfide, and iron at the concentrations reported.

The total dissolved solids (TDS) concentration was reported slightly greater than the ODWQS aesthetic objective of 500, however is still considered to be “good” based on the Guidelines for Canadian Drinking Water Quality. No treatment for TDS is recommended.

Fluoride was reported to fall within the range of 1.5 – 2.4 mg/L. As such, treatment is not required, however the users should be notified of the presence of fluoride and to contact the local medical officer of health with any questions.

Sodium was reported to exceed the 20 mg/L trigger concentration set to inform users on a sodium restricted diet to discuss how the drinking water concentration may impact their overall daily sodium intake. The sodium concentration is less than the ODWQS aesthetic criteria for taste. As such, sodium treatment is not required.

Hardness was reported at a concentration greater than the ODWQS operational guideline optimal range. As such, a conventional water softener is required. Softeners utilize cation resin, as such, the detection of aluminum is expected to be absorbed by the cation resin. Softeners automatically regenerate with sodium chloride, to control additional sodium in the water, potassium chloride could be utilized.

**WATER TREATMENT RECCOMENDATION SUMMARY**

Based on the above reported water quality, the following treatment equipment is recommended in process order:

- Atmospheric water storage tank including an oxidant injected upstream. The water tank allows oxidation of required parameters into solids. The tank also provides peak demand storage.
- 25-micron nominal cartridge filter to capture oxidized particulate.
- Water softener.
- 5-micron nominal cartridge filter to capture any remaining particles.
- Ultraviolet unit certified by NSF 55 Class A for disinfection.





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The treatment equipment described above is considered conventional and readily available and does not include the required pumps and controls. While the equipment size is yet to be determined, it is expected to be large residential/small commercial in size based on the proposed facility use. In addition, the drinking water will not be considered the primary water source for users i.e. institutional non-residential use. As such, the proposed facility will be classified as a small non-municipal, non-residential drinking water system regulated by the local health unit under Ontario Regulation (O.Reg.) 319/08. The drinking water system is required to be registered and assessed and inspected by the local drinking water health inspector ensuring the water system is regularly maintained.

**CLOSING**

Cambium trusts that this correspondence meets the needs of the Client. Should you have any questions or require further clarification with respect to this document, please do not hesitate to contact the undersigned at (705) 740-4378.

Best regards,

**Cambium Inc.**  
 DocuSigned by:  
  
 5230E648B0C64BD...

Stew Dolstra, Honours, B.Sc., Dipl. BCIN  
 Well Technician  
 Senior Project Manager

*Encl. Cambium Qualifications & Limitations  
 Well Record Tag # A395664  
 Laboratory Certificate of Analysis 3004621 and 3004622*

\\cambiumincstorage.file.core.windows.net/projects\22000 to 22099\22068-001 Chapel-Grace -WWW- 912 David Mnchstr Rd\Correspondence\Letters\2025-03-24 LTR DW Quality Assessment.docx





March 24, 2025

## CAMBIUM QUALIFICATIONS AND LIMITATIONS

### Limited Warranty

In performing work on behalf of a client, Cambium relies on its client to provide instructions on the scope of its retainer and, on that basis, Cambium determines the precise nature of the work to be performed. Cambium undertakes all work in accordance with applicable accepted industry practices and standards. Unless required under local laws, other than as expressly stated herein, no other warranties or conditions, either expressed or implied, are made regarding the services, work or reports provided.

### Reliance on Materials and Information

The findings and results presented in reports prepared by Cambium are based on the materials and information provided by the client to Cambium and on the facts, conditions and circumstances encountered by Cambium during the performance of the work requested by the client. In formulating its findings and results into a report, Cambium assumes that the information and materials provided by the client or obtained by Cambium from the client or otherwise are factual, accurate and represent a true depiction of the circumstances that exist. Cambium relies on its client to inform Cambium if there are changes to any such information and materials. Cambium does not review, analyze or attempt to verify the accuracy or completeness of the information or materials provided, or circumstances encountered, other than in accordance with applicable accepted industry practice. Cambium will not be responsible for matters arising from incomplete, incorrect or misleading information or from facts or circumstances that are not fully disclosed to or that are concealed from Cambium during the provision of services, work or reports.

Facts, conditions, information and circumstances may vary with time and locations and Cambium's work is based on a review of such matters as they existed at the particular time and location indicated in its reports. No assurance is made by Cambium that the facts, conditions, information, circumstances or any underlying assumptions made by Cambium in connection with the work performed will not change after the work is completed and a report is submitted. If any such changes occur or additional information is obtained, Cambium should be advised and requested to consider if the changes or additional information affect its findings or results.

When preparing reports, Cambium considers applicable legislation, regulations, governmental guidelines and policies to the extent they are within its knowledge, but Cambium is not qualified to advise with respect to legal matters. The presentation of information regarding applicable legislation, regulations, governmental guidelines and policies is for information only and is not intended to and should not be interpreted as constituting a legal opinion concerning the work completed or conditions outlined in a report. All legal matters should be reviewed and considered by an appropriately qualified legal practitioner.

### Site Assessments

A site assessment is created using data and information collected during the investigation of a site and based on conditions encountered at the time and particular locations at which fieldwork is conducted. The information, sample results and data collected represent the conditions only at the specific times at which and at those specific locations from which the information, samples and data were obtained and the information, sample results and data may vary at other locations and times. To the extent that Cambium's work or report considers any locations or times other than those from which information, sample results and data was specifically received, the work or report is based on a reasonable extrapolation from such information, sample results and data but the actual conditions encountered may vary from those extrapolations.

Only conditions at the site and locations chosen for study by the client are evaluated; no adjacent or other properties are evaluated unless specifically requested by the client. Any physical or other aspects of the site chosen for study by the client, or any other matter not specifically addressed in a report prepared by Cambium, are beyond the scope of the work performed by Cambium and such matters have not been investigated or addressed.

### Reliance

Cambium's services, work and reports may be relied on by the client and its corporate directors and officers, employees, and professional advisors. Cambium is not responsible for the use of its work or reports by any other party, or for the reliance on, or for any decision which is made by any party using the services or work performed by or a report prepared by Cambium without Cambium's express written consent. Any party that relies on services or work performed by Cambium or a report prepared by Cambium without Cambium's express written consent, does so at its own risk. No report of Cambium may be disclosed or referred to in any public document without Cambium's express prior written consent. Cambium specifically disclaims any liability or responsibility to any such party for any loss, damage, expense, fine, penalty or other such thing which may arise or result from the use of any information, recommendation or other matter arising from the services, work or reports provided by Cambium.

### Limitation of Liability

Potential liability to the client arising out of the report is limited to the amount of Cambium's professional liability insurance coverage. Cambium shall only be liable for direct damages to the extent caused by Cambium's negligence and/or breach of contract. Cambium shall not be liable for consequential damages.

### Personal Liability

The client expressly agrees that Cambium employees shall have no personal liability to the client with respect to a claim, whether in contract, tort and/or other cause of action in law. Furthermore, the client agrees that it will bring no proceedings nor take any action in any court of law against Cambium employees in their personal capacity.

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Ministry of the Environment,  
Conservation and Parks

W I ag#: A395664  
A395664  
Print Below

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in:  Metric  Imperial

Page \_\_\_ of \_\_\_

**Well Owner's Information**

First Name \_\_\_\_\_ Last Name/Organization **RCCG Chapel of Grace** E-mail Address \_\_\_\_\_  Well Constructed by Well Owner

Mailing Address (Street Number/Name) ~~912 David Manchester Road~~ Municipality **Ottawa** Province **ON** Postal Code **K1A 1L0** Telephone No. (inc. area code) \_\_\_\_\_

Well Location ~~# L-74 Colonnade Road North Nepean ONT K2E 7L2~~

Address of Well Location (Street Number/Name) **912 David Manchester Road** Township **West Carleton** Lot **9** Concession **4**

County/District/Municipality **Ottawa Carleton** City/Town/Village **Carp** Province **Ontario** Postal Code \_\_\_\_\_

UTM Coordinates Zone **18** Easting **420431** Northing **5015686** Municipal Plan and Sublot Number **Plan 5R-13359** Other **Part 1**

**Overburden and Bedrock Materials/Abandonment Sealing Record** (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)
	Sand	Clay		0' to 8'
Grey	Limestone			8' to 73'
Grey	Limestone			73' to 140'
Grey	Limestone	W/Grey	Sandstone	140' to 173'
Grey	Limestone	W/Grey	Sandstone	173' to 180'

**Annular Space**

Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m <sup>3</sup> /ft <sup>3</sup> )
40' to 30'	Neat cement	10.92
30' to 0'	Bentonite slurry	4.20

**Results of Well Yield Testing**

After test of well yield, water was:  
 Clear and sand free  
 Other, specify **Not tested**

If pumping discontinued, give reason: \_\_\_\_\_

Time (min)	Water Level (m/ft)	Recovery	
		Time (min)	Water Level (m/ft)
Static Level	4.7"		59.3"
1	12.9	1	49.5
2	18.2	2	42.6
3	23.8	3	37.2
4	28	4	34.8
5	31.7	5	32.7
10	38.2	10	25.5
15	42.7	15	20.4
20	46.5	20	17.6
25	50	25	14.7
30	53.2	30	12.2
40	56.2	40	8.8
50	58.3	50	5.3
60	59.3"	60	4.9"

Pump intake set at (m/ft) **170**

Pumping rate (l/min / GPM) **12**

Duration of pumping **1 hrs + 0 min**

Final water level end of pumping (m/ft) **59.3"**

If flowing give rate (l/min/GPM) \_\_\_\_\_

Recommended pump depth (m/ft) **140"**

Recommended pump rate (l/min/GPM) **10**

Well production (l/min/GPM) **10**

Disinfected?  Yes  No

**Method of Construction**

Cable Tool  Diamond  Public  Commercial  Not used  
 Rotary (Conventional)  Jetting  Domestic  Municipal  Dewatering  
 Rotary (Reverse)  Driving  Livestock  Test Hole  Monitoring  
 Boring  Digging  Irrigation  Cooling & Air Conditioning  
 Air Percussion  Industrial  Other, specify \_\_\_\_\_  
 Other, specify **SURPER**

**Construction Record - Casing**

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)	Status of Well
6.14"	Steel	.188"	+2' to 40'	<input checked="" type="checkbox"/> Water Supply
6"	Open Hole		40' to 180'	<input type="checkbox"/> Replacement Well

Test Hole  Recharge Well  Dewatering Well  Observation and/or Monitoring Hole  Alteration (Construction)  Abandoned, Insufficient Supply  Abandoned, Poor Water Quality  Abandoned, other, specify \_\_\_\_\_  Other, specify \_\_\_\_\_

**Construction Record - Screen**

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)
			From _____ To _____

**Water Details**

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____
13.73 (m/ft)	<input checked="" type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____
17.3 (m/ft)	<input checked="" type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____
	<input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____

**Hole Diameter**

Depth (m/ft)	Diameter (cm/in)
0' to 40'	9.34"
40' to 180'	6"

**Well Contractor and Well Technician Information**

Business Name of Well Contractor **Air Rock Drilling Co. Ltd.** Well Contractor's Licence No. **C7681**

Business Address (Street Number/Name) \_\_\_\_\_ Municipality **West Carleton**

Province **ON** Postal Code **K1A 2Z0** Business E-mail Address **air-rock@sympatico.ca**

Bus. Telephone No. (inc. area code) **613882170** Name of Well Technician (Last Name, First Name) **Hanna, Jeremy**

Well Technician's Licence No. **13632** Signature of Technician and/or Contractor \_\_\_\_\_ Date Submitted **12 31 2023**

**Map of Well Location**

Please provide a map below following instructions on the back.

Comments: **1/2HP - 10GPM set 140 FT**

Well owner's information package delivered  Yes  No

Date Package Delivered **12/05/2023**

Ministry Use Only  
 Audit No. **2408322**  
 Received \_\_\_\_\_



Environment Testing

**Certificate of Analysis**

Client: Paterson Group  
 9 AURIGA DRIVE  
 Ottawa, ON  
 K2E 7T9  
 Attention: Mr. Zavian Buchanan  
 PO#: 59259  
 Invoice to: Paterson Group

Report Number: 3004621  
 Date Submitted: 2024-01-19  
 Date Reported: 2024-01-25  
 Project: PH4674  
 COC #: 912676

Group	Analyte	MRL	Units	Guideline	1716326 GW 2024-01-18 TW1-GW1	1716327 GW 2024-01-18 TW1-GW2
Anions	Cl	1	mg/L	AO 250	51	56
	F	0.10	mg/L	MAC 1.5	1.86*	1.74*
	N-NO2	0.10	mg/L	MAC 1.0	<0.10	<0.10
	N-NO3	0.10	mg/L	MAC 10.0	<0.10	<0.10
	SO4	1	mg/L	AO 500	19	22
General Chemistry	Alkalinity as CaCO3	5	mg/L	OG 30-500	382	379
	Colour (Apparent)	2	TCU	AO 5	236*	74*
	Conductivity	5	uS/cm		836	835
	DOC	0.5	mg/L	AO 5	1.9	2.3
	pH	1.00		6.5-8.5	8.00	7.99
	Phenols	0.001	mg/L		<0.001	<0.001
	S2-	0.01	mg/L	AO 0.05	10.0*	8.45*
	Tannin & Lignin	0.1	mg/L		0.5	0.2
	TDS (COND - CALC)	1	mg/L	AO 500	543*	543*
Turbidity	0.1	NTU	AO 5	49.0*	41.7*	
Hardness	Hardness as CaCO3	1	mg/L	OG 80-100	239*	260*
Indices/Calc	Ion Balance	0.01			1.01	1.02
Metals	Ag	0.0002	mg/L		<0.0002	<0.0002
	Al	0.02	mg/L	OG 0.1	0.50*	0.24*
	As	0.002	mg/L	IMAC 0.01	<0.002	<0.002
	B	0.02	mg/L	IMAC 5.0	0.40	0.37
	Ba	0.02	mg/L	MAC 1.0	0.64	0.62
	Be	0.001	mg/L		<0.001	<0.001
	Ca	1	mg/L		43	48
	Cd	0.0002	mg/L	MAC 0.005	<0.0002	<0.0002

Guideline = ODWSOG

\* = Guideline Exceedence

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Results relate only to the parameters tested on the samples submitted.  
 Methods references and/or additional QA/QC information available on request.



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Group	Analyte	MRL	Units	Guideline	1716326 GW 2024-01-18 TW1-GW1	1716327 GW 2024-01-18 TW1-GW2
Metals	Co	0.0004	mg/L		<0.0004	<0.0004
	Cr	0.002	mg/L	MAC 0.05	<0.002	<0.002
	Cu	0.002	mg/L	AO 1	<0.002	<0.002
	Fe	0.06	mg/L	AO 0.3	0.42*	0.16
	Hg	0.0002	mg/L	MAC 0.001	<0.0002	<0.0002
	K	1	mg/L		9	9
	Mg	1	mg/L		32	34
	Mn	0.02	mg/L	AO 0.05	<0.02	<0.02
	Mo	0.01	mg/L		<0.01	<0.01
	Na	1	mg/L	AO 200	107	102
	Ni	0.01	mg/L		<0.01	<0.01
	Pb	0.002	mg/L	MAC 0.010	<0.002	<0.002
	Sb	0.001	mg/L	IMAC 0.006	<0.001	<0.001
	Se	0.002	mg/L	MAC 0.05	0.003	<0.002
	Sr	0.002	mg/L		3.07	3.17
	Tl	0.0002	mg/L		<0.0002	<0.0002
	U	0.002	mg/L	MAC 0.02	<0.002	<0.002
	V	0.002	mg/L		<0.002	<0.002
Zn	0.02	mg/L	AO 5	<0.02	<0.02	
Microbiology	Escherichia Coli	0	ct/100mL	MAC 0	0	0
	Total Coliforms	0	ct/100mL	MAC 0	0	0
Nutrients	N-NH3	0.020	mg/L		0.456	0.482
	Total Kjeldahl Nitrogen	0.100	mg/L		0.820	1.00
VOCs Surrogates	1,2-dichloroethane-d4	0	%			83
	4-bromofluorobenzene	0	%			78

Guideline = ODWSOG

\* = Guideline Exceedence

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Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1716326 GW 2024-01-18 TW1-GW1	1716327 GW 2024-01-18 TW1-GW2
VOCs Surrogates	Toluene-d8	0	%				118
Volatiles	1,1,1,2-tetrachloroethane	0.5	ug/L				<0.5
	1,1,1-trichloroethane	0.4	ug/L				<0.4
	1,1,2,2-tetrachloroethane	0.5	ug/L				<0.5
	1,1,2-trichloroethane	0.4	ug/L				<0.4
	1,1-dichloroethane	0.4	ug/L				<0.4
	1,1-dichloroethylene	0.5	ug/L	MAC 14			<0.5
	1,2-dichlorobenzene	0.4	ug/L	MAC 200			<0.4
	1,2-dichloroethane	0.5	ug/L	IMAC 5			<0.5
	1,2-dichloropropane	0.5	ug/L				<0.5
	1,3,5-trimethylbenzene	0.3	ug/L				<0.3
	1,3-dichlorobenzene	0.4	ug/L				<0.4
	1,3-Dichloropropylene (cis+trans)	0.5	ug/L				<0.5
	1,4-dichlorobenzene	0.4	ug/L	MAC 5			<0.4
	Acetone	5	ug/L				<5
	Benzene	0.5	ug/L	MAC 1			<0.5
	Bromodichloromethane	0.3	ug/L				<0.3
	Bromoform	0.4	ug/L				<0.4
	Bromomethane	0.5	ug/L				<0.5
	c-1,2-Dichloroethylene	0.4	ug/L				<0.4
	c-1,3-Dichloropropylene	0.5	ug/L				<0.5
Carbon Tetrachloride	0.2	ug/L	MAC 2			<0.2	
Chloroethane	0.5	ug/L				<0.5	
Chloroform	0.5	ug/L				<0.5	
Dibromochloromethane	0.3	ug/L				<0.3	

Guideline = ODWSOG

\* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.  
 Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

**Certificate of Analysis**

Client: Paterson Group  
 9 AURIGA DRIVE  
 Ottawa, ON  
 K2E 7T9  
 Attention: Mr. Zavian Buchanan  
 PO#: 59259  
 Invoice to: Paterson Group

Report Number: 3004621  
 Date Submitted: 2024-01-19  
 Date Reported: 2024-01-25  
 Project: PH4674  
 COC #: 912676

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1716326 GW 2024-01-18 TW1-GW1	1716327 GW 2024-01-18 TW1-GW2
Volatiles	Dichlorodifluoromethane	0.5	ug/L				<0.5
	Dichloromethane	4.0	ug/L	MAC 50			<4.0
	Ethylbenzene	0.5	ug/L	MAC 140			<0.5
	Ethylene Dibromide	0.2	ug/L				<0.2
	Hexane	5	ug/L				<5
	m/p-xylene	0.4	ug/L				0.5
	Methyl Ethyl Ketone (MEK)	2	ug/L				<2
	Methyl Isobutyl Ketone (MIBK)	5	ug/L				<5
	Methyl Tert Butyl Ether (MTBE)	2	ug/L	AO 15			<2
	Monochlorobenzene	0.5	ug/L	MAC 80			<0.5
	o-xylene	0.4	ug/L				<0.4
	Styrene	0.5	ug/L				<0.5
	t-1,2-Dichloroethylene	0.4	ug/L				<0.4
	t-1,3-Dichloropropylene	0.5	ug/L				<0.5
	Tetrachloroethylene	0.3	ug/L	MAC 10			<0.3
	Toluene	0.4	ug/L	MAC 60			0.7
	Trichloroethylene	0.3	ug/L	MAC 5			<0.3
	Trichlorofluoromethane	0.5	ug/L				<0.5
Vinyl Chloride	0.2	ug/L	MAC 1			<0.2	
Xylene; total	0.5	ug/L	MAC 90			0.5	

Guideline = ODWSOG

\* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted.  
 Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



Environment Testing

**Certificate of Analysis**

Client: Paterson Group  
 9 AURIGA DRIVE  
 Ottawa, ON  
 K2E 7T9  
 Attention: Mr. Zavian Buchanan  
 PO#: 59260  
 Invoice to: Paterson Group

Report Number: 3004622  
 Date Submitted: 2024-01-19  
 Date Reported: 2024-01-24  
 Project: PH4674  
 COC #: 912677

Lab I.D. 1716328  
 Sample Matrix GW  
 Sample Type  
 Sampling Date 2024-01-18  
 Sample I.D. TW1-GW3

Group	Analyte	MRL	Units	Guideline	
General Chemistry	Colour (Apparent)	2	TCU	AO 5	15*
	Turbidity	0.1	NTU	AO 5	38.3*

**Guideline = ODWSOG**

**\* = Guideline Exceedence**

Results relate only to the parameters tested on the samples submitted.  
 Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range