



**TOWNSHIP OF MELANCTHON
HYBRID COUNCIL MEETING
THURSDAY, MARCH 21ST, 2024 - 5:00 P.M.**

Council meetings are recorded and will be available on the Township website under Quick Links – Council Agendas and Minutes within 5 business days of the Council meeting.

Join Zoom Meeting

<https://us02web.zoom.us/j/86940609565?pwd=cIRldXZqR2J2M1JCbkhzSmczSUd0QT09>

Meeting ID: 869 4060 9565

Passcode: 168952

One tap mobile

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- +1 204 272 7920 Canada
- +1 438 809 7799 Canada

Meeting ID: 869 4060 9565

Passcode: 168952

AGENDA

1. Call to Order

2. Land Acknowledgement Statement

We will begin the meeting by sharing the Land Acknowledgement Statement:

We would like to begin by acknowledging that Melancthon Township recognizes the ancestral lands and treaty territories of the Tionontati (Petun/Wyandot(te)), Haudenosaunee (Six Nations), and Anishinaabe Peoples. The Township of Melancthon resides within the lands named under the Haldimand Deed of 1784 and the Lake Simcoe-Nottawasaga Treaty (Treaty 18).

These territories upon which we live and learn, are steeped in rich Indigenous history and traditions. It is with this statement that we declare to honour and respect the past and present connection of Indigenous peoples with this land, its waterways and resources.

3. Announcements

- 4. Additions/Deletions/Approval of Agenda**
- 5. Declaration of Pecuniary Interest and the General Nature Thereof**
- 6. Approval of Draft Minutes – February 15th, 2024**
- 7. Business Arising from Minutes**
- 8. Point of Privilege or Personal Privilege**
- 9. Public Question Period** (Please visit our website under Agendas and Minutes for information on Public Question Period)
 1. Email from Annalea Kidd, Shelburne & District Horticultural Society
- 10. Public Works**
 1. 2023 Accounts
 2. 2024 Accounts
 3. Tender for Rehabilitation of Bridge 2023 Recommendation from Mark August, RJ Burnside & Associates
 4. Recommendations from the Roads Sub-Committee Meeting held on March 4th, 2024
 5. Other
- 11. Planning**
 1. Applications to Permit
 2. Other
- 12. Strategic Planning**
 1. Report from Denise B. Holmes, CAO/Clerk – Strategic Planning Public Open House
- 13. Climate Change Initiatives**
- 14. Police Services Board**
 1. Update from Mayor White regarding the Joint PSB Meeting held on March 8, 2024
- 15. County Council Update**
- 16. Committee/Board Reports & Recommendations**
 1. Recommendation from the Heritage Advisory Committee Meeting Held March 5th, 2024
 2. Recommendation from the Horning's Mills Park Board Meeting held on March 13, 2024
- 17. Correspondence**

Board, Committee & Working Group Minutes

1. Roads Sub-Committee – February 5, 2024
2. Heritage Advisory Committee – February 6, 2024
3. Shelburne Public Library – January 16, 2024

Items for Information Purposes

1. Town of Petrolia – Return to Combined ROMA & OGRA Conferences
2. Roxborough Developments Ltd – Request for Council Resolution in Support of New Development
3. Township of Springwater – Amendment to the Occupational Health and Safety Act to Clarify the Definition of "Employer"

4. Western Ontario Wardens Caucus – Support to AMO’s Request for the Call for a Social and Economic Prosperity Review
5. Watson and Associates – New Funding for Rural Communities for housing Growth
6. Town of Mono – Letter to the Minister of Transportation regarding the MTO’s two phase study of Highway 10 safety in Caledon and Dufferin County
7. Upper Grand District School Board – Information Notice regarding Primrose ES Boundary Review
8. Township of Amaranth – Resolution regarding Primrose Elementary School
9. Autism Ontario – April 2, 2024 World Autism Awareness Day
10. Township of Mulmur – Motion to Endorse the motion passed by the Township of Melancthon regarding the Fire Department Radio System Project
11. Triton Engineering Services Limited – Invitation to the first Public Information Centre and Open House
12. Township of Amaranth – Resolution regarding Highway 413
13. Dufferin County – Invitation to Community Information Session March 26, 2024
14. Nottawasaga Valley Conservation Authority – Legislative and Regulatory Changes Affecting NVCA Plan Review and Development Permitting
15. Grand River Conservation Authority Summary of Annual General Meeting – February 23, 2024
16. Grand River Conservation Authority – Canadian Heritage River 30th Anniversary Planning
17. Bluewater Geoscience Consultants Inc – Semi-Annual Groundwater Monitoring and Sampling Report 2023
18. Ministry of Natural Resources and Forestry – Update: Regulation of Development for the Protection of People and Property from Natural Hazards in Ontario

Items for Council Action

1. Application for Tile Drainage Loan – Ajeet Pal Sran & Amangeet Gill
2. Petition for Drainage Works by Owner – Martin Drainage Works

18. General Business

1. 2023 Accounts
2. 2024 Accounts
3. Notice of Intent to Pass By-law
 1. Report from Denise B. Holmes, CAO/Clerk – Community Peer Review Selection Agreement Between North Dufferin Agriculture and Community Task Force, Strada Aggregates Inc and Township of Melancthon
 1. By-law to Authorize the Signing of a Community Peer Review Selection Agreement Between the North Dufferin Agriculture and Community Task Force, The Corporation of the Township of Melancthon and Strada Aggregates Inc
 2. Report from Denise B. Holmes, CAO/Clerk – MOU Between the County of Dufferin and Township of Melancthon for Shared Land Use Planning
 1. By-law to Authorize the Signing of a Memorandum of Understanding Between the Corporation of the County of Dufferin and the Corporation of the Township of Melancthon for Shared Land Use Planning Services
 3. By-law to Adopt the Estimates of All Sums Required During the Year and to Strike the Rates of Taxation, and to Further Provide for

Penalty and Interest in Default of Payment Thereof for the Year 2024

4. New/Other Business/Additions
 1. Report from Denise B. Holmes CAO/Clerk – Melancthon Council Award for Community Leadership
 2. Report from Denise B. Holmes CAO/Clerk – Council Conference and Continuing Education Policy
 3. 2024 Shelburne Public Library Agreement
 4. Grand River Conservation Authority – 2024 Municipal Apportionment (Mayor White)
 5. Township of Mulmur – North Dufferin Community Centre Request for Funding
 6. Horning’s Mills Community Hall – Window Replacement (Staff to speak to quotes), Parking Lot and Dehumidifier (Councillor Plowright)
 7. Land Rental of Township Property – Part of Lot 13, Concession 4 NE – Discussion
 8. Other/Addition

19. Delegations

1. 5:45 p.m. – Althea Ali, Dufferin County Multicultural Foundation – Request for Flag Raising and Proclamation for 2024 Multicultural Day
2. 6:00 p.m. – Ajeet Sran – Entrance Approval for property off 7th Line SW
3. 6:30 p.m. – Rob Brown, Township Solicitor – Re: Deviation Road – Clearview Township (Closed Session) - Section 239(2)(e) litigation or potential litigation, including matters before administrative tribunal, affecting the local board and (f) advice that is subject to Solicitor/Client privilege, including communications necessary for that purpose

20. Closed Session

1. Approval of Draft Minutes – February 1st, 2024
2. Business Arising from Minutes
3. Section 239 c) - a proposed or pending acquisition or disposition of land By the municipality or local board - Possible Land Acquisition and Disposition in Riverview - Discussion
4. Rise With or Without Report from Closed Session

21. Third Reading of By-laws

22. Notice of Motion

23. Confirmation By-law

24. Adjournment and Date of Next Meeting – Thursday, April 4th, 2024 at 5:00 p.m.

Denise Holmes

From: Shelburne Gardeners [REDACTED]
Sent: Thursday, February 22, 2024 11:41 AM
To: Denise Holmes
Subject: Tree Program

Hi,
We are wondering if you have ever considered running a tree program as part of a greening initiative for your township?

Mulmur and Mono both run one.

<https://mulmur.ca/live/news/introducing-our-heritage-tree-program>

<https://townofmono.com/shop>

It is likely something that you could easily partner with them in and have the trees delivered on the same day to help with delivery and purchasing cost.

Thanks,
Annalea Kidd [REDACTED]
Secretary/Treasurer
Shelburne & District Horticultural Society

If you no longer wish to receive emails from the society please let me know by replying with "Please remove me"



March 4, 2024

Via: Email

Denise Holmes, AMCT
CAO/Clerk
Township of Melancthon
157101 Highway 10
Melancthon ON L9V 2E6

Dear Ms. Holmes:

**Re: Rehabilitation of Bridge 2023
Township of Melancthon
Project No.: 300056829.0000**

On February 7, 2024, the Township of Melancthon (Township) advertised a Tender for the Rehabilitation of Bridge 2023. A total of 19 sets of Tender Documents were downloaded by Contractors during the Tender period. Five Bids were submitted to the Township on February 28, 2024 and were opened privately by Township staff shortly after the Bid Closing Time of 2:00 p.m.

Copies of the Bids were forwarded to R.J. Burnside & Associates Limited (Burnside) for review and comment. After an evaluation and review of the Bids, the verified Tender prices in ascending order, including HST and provisional items, are as follows:

Bid Results

Rank	Contractor	Total Bid Price (incl. HST)
1	HugoMB Contracting Inc.	\$245,789.13
2	Jarlian Construction Inc.	\$249,465.58
3	AJN Builders Inc.	\$261,510.25
4	Clearwater Structures Inc.	\$357,900.38
5	Marbridge Construction Ltd.	\$408,585.40

No mathematical errors were found to affect the overall bid results. All provisional items were included in the total bid price and the ranking of bids would remain unchanged if the provisional items were not included.

As part of the Tender Submission, bidders were required to provide the following information:

- Bid Form, signed
- The Security (Bid Bond)
- The Agreement to Bond
- Appendix "A" – List of Bid Documents
- Appendix "B" – Subcontractors
- Appendix "C" – Schedule
- Appendix "D" – Residency
- Appendix "E" – Proposed Alternatives
- Appendix "F" – List of Experience
- Appendix "G" – Schedule of Unit Prices

All tenderers completed the Bid Form and submitted the required documentation in its entirety, including the necessary securities and bonding.

Experience and References

Burnside has worked with HugoMB Contracting Inc. on past projects and acknowledge that they have the experience and capability to complete this project to the satisfaction of the Township. It should also be noted that HugoMB Contracting Inc. had completed the Bridge 13 Rehabilitation project for the Township in 2021.

Recommendation

Based on our analysis of the bid submitted by HugoMB Contracting Inc., the submission of all accompanying documentation, and low bid price of \$245,789.13 (incl. HST), Burnside recommends that, should the Township decide to proceed with the Rehabilitation of Bridge 2023, the project be awarded to HugoMB Contracting Inc.

Yours truly,

R.J. Burnside & Associates Limited



Mark August
Project Manager
MA:tm

Enclosure(s) Township of Melancthon, Rehabilitation of Bridge 2023 – Tender Evaluation

TENDER EVALUATION

Client: Township of Melancthon
Project: Rehabilitation of Bridge 2023
Project No.: 300056829
Date: February 29, 2024
Completed By: Jackie Hunter

Page No. 1	Schedule A - General Works	Unit	Quantity	HugoMB Contracting Inc.		Jarlian Construction Inc.		AJN Builders Inc.		Clearwater Structures Inc.		Marbridge Construction Ltd.		Breakdown		
				Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Low	Med	High
Item	Description			Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Low	Med	High
1	Mobilization and Demobilization	LS	1	\$14,600.00	\$14,600.00	\$24,000.00	\$24,000.00	\$25,000.00	\$25,000.00	\$51,807.00	\$51,807.00	\$11,000.00	\$11,000.00	\$11,000.00	\$25,281.40	\$51,807.00
2	Contract Bonds and Insurance	LS	1	\$7,400.00	\$7,400.00	\$7,000.00	\$7,000.00	\$10,000.00	\$10,000.00	\$4,296.00	\$4,296.00	\$14,200.00	\$14,200.00	\$4,296.00	\$8,579.20	\$14,200.00
3	Temporary Traffic Control and Signing	LS	1	\$9,800.00	\$9,800.00	\$7,000.00	\$7,000.00	\$12,000.00	\$12,000.00	\$24,955.00	\$24,955.00	\$17,000.00	\$17,000.00	\$7,000.00	\$14,151.00	\$24,955.00
4	Unwatering Structure Excavations	LS	1	\$30,830.00	\$30,830.00	\$4,000.00	\$4,000.00	\$10,000.00	\$10,000.00	\$31,963.00	\$31,963.00	\$31,000.00	\$31,000.00	\$4,000.00	\$21,558.60	\$31,963.00
5	Temporary Flow Passage System	LS	1	\$28,200.00	\$28,200.00	\$44,000.00	\$44,000.00	\$15,000.00	\$15,000.00	\$46,460.00	\$46,460.00	\$22,000.00	\$22,000.00	\$15,000.00	\$31,132.00	\$46,460.00
6	Fish Salvage and License to Collect Fish	LS	1	\$1,600.00	\$1,600.00	\$2,000.00	\$2,000.00	\$6,000.00	\$6,000.00	\$2,070.00	\$2,070.00	\$3,500.00	\$3,500.00	\$1,600.00	\$3,034.00	\$6,000.00
7	Heavy-Duty Wire-Backed Silt Fence Barriers	m	80	\$34.00	\$2,720.00	\$30.00	\$2,400.00	\$30.00	\$2,400.00	\$55.50	\$4,440.00	\$65.00	\$5,200.00	\$2,400.00	\$3,432.00	\$5,200.00
8	Removal of Asphalt Pavement - Full Depth	m ²	155	\$26.50	\$4,107.50	\$40.00	\$6,200.00	\$60.00	\$9,300.00	\$8.00	\$1,240.00	\$55.00	\$8,525.00	\$1,240.00	\$5,974.50	\$9,300.00
9	Clean Out of Existing Culvert	LS	1	\$18,960.00	\$18,960.00	\$8,000.00	\$8,000.00	\$10,000.00	\$10,000.00	\$12,048.00	\$12,048.00	\$25,000.00	\$25,000.00	\$8,000.00	\$14,801.60	\$25,000.00
10	Concrete Removals - Partial Depth, Type A	m ³	2	\$1,600.00	\$3,200.00	\$2,500.00	\$5,000.00	\$5,000.00	\$10,000.00	\$3,387.00	\$6,774.00	\$2,800.00	\$5,600.00	\$3,200.00	\$6,114.80	\$10,000.00
11	Concrete Removals - Partial Depth, Type C (Provisional)	m ³	0.75	\$7,400.00	\$5,550.00	\$4,000.00	\$3,000.00	\$6,000.00	\$4,500.00	\$8,731.00	\$6,548.25	\$7,000.00	\$5,250.00	\$3,000.00	\$4,969.65	\$6,548.25
12	Concrete Removals - Full Depth, Inlet & Outlet	m ³	3.5	\$1,800.00	\$6,300.00	\$2,850.00	\$9,975.00	\$5,000.00	\$17,500.00	\$2,855.00	\$9,992.50	\$3,000.00	\$10,500.00	\$6,300.00	\$10,853.50	\$17,500.00
13	Concrete In Inlet and Outlet	m ³	3.5	\$2,200.00	\$7,700.00	\$5,850.00	\$20,475.00	\$4,000.00	\$14,000.00	\$4,660.00	\$16,310.00	\$10,000.00	\$35,000.00	\$7,700.00	\$18,697.00	\$35,000.00
14	Concrete Patches, Unformed Surface	m ³	2	\$2,200.00	\$4,400.00	\$2,000.00	\$4,000.00	\$4,000.00	\$8,000.00	\$2,472.00	\$4,944.00	\$2,100.00	\$4,200.00	\$4,000.00	\$5,108.80	\$8,000.00
15	Concrete Patches, Formed Surface - Culvert Barrel (Provisional)	m ³	0.75	\$11,000.00	\$8,250.00	\$15,000.00	\$11,250.00	\$7,000.00	\$5,250.00	\$22,993.00	\$17,244.75	\$35,000.00	\$26,250.00	\$5,250.00	\$13,648.95	\$26,250.00
16	Granular A (Provisional)	t	100	\$30.00	\$3,000.00	\$47.00	\$4,700.00	\$30.00	\$3,000.00	\$66.00	\$6,600.00	\$60.00	\$6,000.00	\$3,000.00	\$4,660.00	\$6,600.00
17a)	Dowels Into Concrete (Inlet/Outlet)	ea	65	\$85.00	\$5,525.00	\$32.00	\$2,080.00	\$25.00	\$1,625.00	\$34.50	\$2,242.50	\$45.00	\$2,925.00	\$1,625.00	\$2,879.50	\$5,525.00
17b)	Dowels Into Concrete (Barrel) (Provisional)	ea	88	\$55.00	\$4,840.00	\$32.00	\$2,816.00	\$25.00	\$2,200.00	\$34.50	\$3,036.00	\$35.00	\$3,080.00	\$2,200.00	\$3,194.40	\$4,840.00
18	Reinforcing Steel Bar (Provisional)	t	1	\$6,500.00	\$6,500.00	\$5,400.00	\$5,400.00	\$6,500.00	\$6,500.00	\$6,641.00	\$6,641.00	\$4,000.00	\$4,000.00	\$4,000.00	\$5,808.20	\$6,641.00
19	Culvert Waterproofing	LS	1	\$7,420.00	\$7,420.00	\$13,000.00	\$13,000.00	\$10,000.00	\$10,000.00	\$12,440.00	\$12,440.00	\$35,000.00	\$35,000.00	\$7,420.00	\$15,572.00	\$35,000.00
20	Earth Excavation, Grading	LS	1	\$4,800.00	\$4,800.00	\$6,000.00	\$6,000.00	\$9,000.00	\$9,000.00	\$7,877.00	\$7,877.00	\$22,000.00	\$22,000.00	\$4,800.00	\$9,935.40	\$22,000.00
21	Hot Mix HL-3	t	22	\$590.00	\$12,980.00	\$450.00	\$9,900.00	\$650.00	\$14,300.00	\$494.00	\$10,868.00	\$700.00	\$15,400.00	\$9,900.00	\$12,689.60	\$15,400.00

Page No. 1	Schedule A - General Works	Unit	Quantity	HugoMB Contracting Inc.		Jarlan Construction Inc.		AJN Builders Inc.		Clearwater Structures Inc.		Marbridge Construction Ltd.		Breakdown		
				Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Unit Price	Total Price	Low	Med	High
Item	Description															
22	Hot Mix HL-8	t	22	\$490.00	\$10,780.00	\$450.00	\$9,900.00	\$550.00	\$12,100.00	\$407.00	\$8,954.00	\$600.00	\$13,200.00	\$8,954.00	\$10,986.80	\$13,200.00
23	Rip-Rap	t	35	\$85.00	\$2,975.00	\$90.00	\$3,150.00	\$100.00	\$3,500.00	\$123.00	\$4,305.00	\$350.00	\$12,250.00	\$2,975.00	\$5,236.00	\$12,250.00
24	Seed & Erosion Control Blanket	m ²	50	\$16.00	\$800.00	\$10.00	\$500.00	\$20.00	\$1,000.00	\$17.00	\$850.00	\$140.00	\$7,000.00	\$500.00	\$2,030.00	\$7,000.00
25	Topsoil, Imported	m ³	5	\$85.00	\$425.00	\$80.00	\$400.00	\$100.00	\$500.00	\$194.00	\$970.00	\$150.00	\$750.00	\$400.00	\$609.00	\$970.00
26	Waterbody Material	t	35	\$110.00	\$3,850.00	\$132.00	\$4,620.00	\$250.00	\$8,750.00	\$310.00	\$10,850.00	\$450.00	\$15,750.00	\$3,850.00	\$8,764.00	\$15,750.00
				SUBTOTAL:	\$217,512.50	SUBTOTAL:	\$220,766.00	SUBTOTAL:	\$231,425.00	SUBTOTAL:	\$316,726.00	SUBTOTAL:	\$361,580.00			
				BID SAYS:	\$217,512.50	BID SAYS:	\$220,766.00	BID SAYS:	\$231,425.00	BID SAYS:	\$316,726.00	BID SAYS:	\$361,580.00			
				DIFFERENCE:	\$0.00	DIFFERENCE:	\$0.00	DIFFERENCE:	\$0.00	DIFFERENCE:	\$0.00	DIFFERENCE:	\$0.00			

HST (@ 13%):	\$28,276.63	HST (@ 13%):	\$28,699.58	HST (@ 13%):	\$30,085.25	HST (@ 13%):	\$41,174.38	HST (@ 13%):	\$47,005.40			
GRAND TOTAL:	\$245,789.13	GRAND TOTAL:	\$249,465.58	GRAND TOTAL:	\$261,510.25	GRAND TOTAL:	\$357,900.38	GRAND TOTAL:	\$408,585.40	\$245,789.13	\$304,650.15	\$408,585.40
BID SAYS:	\$245,789.13	BID SAYS:	\$249,465.58	BID SAYS:	\$261,510.25	BID SAYS:	\$357,900.38	BID SAYS:	\$408,585.40			
DIFFERENCE:	\$0.00	DIFFERENCE:	\$0.00	DIFFERENCE:	\$0.00	DIFFERENCE:	\$0.00	DIFFERENCE:	\$0.00			



The Corporation of
THE TOWNSHIP OF MELANCTHON
157101 Hwy. 10, Melancthon, Ontario, L9V 2E6

Corporation Of the Township Of Melancthon

Memorandum

To: Mayor White And Members of Council

From: Kaitlin Dinnick, Secretary Roads Sub-Committee

Subject: Recommendations from Roads Sub-Committee Meeting Held March 4th, 2024

Date: March 21st, 2024

8.2 General Business; Canada Road Safety Week – May 14th – 20th, 2024

The Committee discussed the importance of Road Safety and raising awareness in the Community. Staff were directed to share road safety statistics to our social media during Canada Road Safety Week.

Recommendation:

The Roads Sub-Committee recommends to Council that we declare May 14th – 20th, 2024 Canada Road Safety Week in Melancthon.

8.4.1 General Business; Road Safety Task Force; Engaging MTO and Dufferin County about Highway 10 and County Road 17 Intersection

The Committee discussed that a lot of accidents have been happening at this intersection as there is a lot of traffic congestion. It was discussed that the County of Dufferin does not have any jurisdiction over this intersection.

Recommendation:

The Roads Sub-Committee recommends to Council that we pass a motion that the MTO examine traffic safety options for the Highway 10 and County Road 17 Intersection such as traffic lights or a roundabout.

8.4.2 General Business; Road Safety Taskforce; Road Safety Priorities and Investments for 2024

The Committee discussed what they think should be our road safety priorities for 2024 and the community safety zones in the Hamlets being extended further out of the Hamlets was mentioned. Staff were directed to measure the distances to extend these zones as this will need to be indicated in the By-law.

Recommendation:

The Roads Sub-Committee recommends to Council that we extend the Community Safety zones in Horning's Mills (Main Street North to County Road 124) and Corbetton (West of the Hamlet) and Riverview.

**APPLICATIONS TO PERMIT FOR APPROVAL
March 21, 2024 COUNCIL MEETING**

PROPERTY OWNER	PROPERTY DESCRIPTION	SIZE OF BUILDING	TYPE OF STRUCTURE	USE OF BUILDING	DOLLAR VALUE	D.C.'s	COMMENTS
Carol Ryder Agent: Samantha Lin- Element Forensic Engineering	Plan 54, Lot 10 681158 260 Sideroad	77m2 (828.82sqft)	Restoration of Existing Detached Garage	Accessory Structure utilized as a Garage	\$50,000	No	Approved
Stuart Black	Plan 54, Lot 18 681167 260 Sideroad	130m2 (1399.1sqft)	Hobby Workshop and Storage Garage	Accessory Building	\$120,000	No	Approved



The Corporation of

THE TOWNSHIP OF MELANCTHON

157101 Highway 10, Melancthon, Ontario, L9V 2E6

MEMO TO COUNCIL

TO: MAYOR WHITE AND MEMBERS OF COUNCIL

FROM: DENISE B. HOLMES, AMCT, CAO/CLERK

SUBJECT: STRATEGIC PLANNING PUBLIC OPEN HOUSE

MEETING DATE: MARCH 21, 2024

At the Council Strategic Planning Workshop held on March 7th, the Consultant advised that the next step in the process would be to go to the Public with the Township's Mission, Vision, Values and Themes.

I have asked the Consultant to set aside the following dates for the Public Open House – Monday, April 15th, Monday, April 22nd and Wednesday, April 24th so that Council can decide on the date, time and place for the Public Open House.

Note – for the week of April 15th, we have the Open House on the Additional Residential Units scheduled for April 16th and Council on April 18th.

MAR 21 2024

STRAT PLAN 1



The Corporation of
THE TOWNSHIP OF MELANCTHON
157101 Hwy. 10, Melancthon, Ontario, L9V 2E6

CORPORATION OF THE TOWNSHIP OF MELANCTHON

MEMORANDUM

To: Mayor White And Members of Council

From: Kaitlin Dinnick, Acting Secretary Heritage Advisory Committee

Subject: Recommendation from Heritage Advisory Committee Meeting held March 5th, 2024

Date: March 6th, 2024

8. Recommendations to Council

The Committee discussed that they would like to have a section in the Fall Newsletter dedicated to the Schoolhouse project. This would get some of the information out that has been collected and will give more people an opportunity to reach out to the members if they have more information to share.

Recommendation:

The Heritage Advisory Committee recommends to Council that they allow the Committee to have a dedicated space in the Fall/Winter 2024 Newsletter for the Schoolhouse project.

MAR 21 2024

BD COMM REC 16.1

Denise Holmes

From: Denise Holmes
Sent: Thursday, March 14, 2024 9:10 AM
To: Denise Holmes
Subject: FW: HM Park Board

From: James McLean <jmclean@melancthontownship.ca>
Sent: Thursday, March 14, 2024 8:28 AM
To: Denise Holmes <dholmes@melancthontownship.ca>
Subject: HM Park Board

Hi Denise,

The Park Board had the following recommendation for Council:

That Council distribute the \$11,350 currently in the Mulmur-Melancthon Recreation Reserve to the Horning's Mills Park Board and Corbetton Park Board.

Thanks,

James



James McLean | Deputy Mayor | Township of Melancthon
| jmclean@melancthontownship.ca | PH: 519-217-2509 | FX: 519-925-1110 |
www.melancthontownship.ca

CORPORATION OF THE TOWNSHIP OF MELANCTHON

The Township of Melancthon Roads Sub-Committee held a meeting on February 5th, 2024, at 9:30 a.m. The following members were present: James McLean, Chair, Bill Neilson, Vice-Chair (Virtual) and Member Darren White (Virtual). Also present were: Craig Micks, Public Works Superintendent, Denise Holmes, CAO/Clerk, and Kaitlin Dinnick, Roads Sub-Committee Secretary.

Appointment of Chair and Vice-Chair (to be conducted by Secretary)

Moved by White, Seconded by Neilson that James McLean be appointed as the Chair of the Roads Sub-Committee of the Township of Melancthon. Carried

Moved by White, Seconded by McLean, that Bill Neilson be appointed as the Vice-Chair of the Roads Sub-Committee of the Township of Melancthon. Carried

Call to Order

Chair McLean called the meeting to order at 9:31 a.m.

Land Acknowledgement

Chair McLean shared the Land Acknowledgement Statement.

Additions/Deletions/Approval of Agenda

Addition: School Buses Being Passed by Cars

Moved by Neilson, Seconded by White that the agenda be approved as amended. Carried.

Declaration of Pecuniary Interest or Conflict of Interest

None.

Approval of Draft Minutes

Moved by White, Seconded by Neilson that the minutes of Roads Sub-Committee Meeting held on December 4th, 2023, be approved as circulated. Carried.

Business Arising from Minutes

None.

Correspondence Items

None.

General Business

1. Update from Public Works Superintendent

Craig advised the Committee that it has been an easy winter so far, the Public Works Department has been working on remodeling the shop, fixing signs, and getting Grader 2 ready for the transmission replacement. They are trying to do some grading but cannot do much with the roads when they are frozen.

2. Update from Police Service Board Chair (Al Blundell)

Chair Blundell updated the Committee that the OPP Strategic Plan has been released and will be available on the Township Website after the Police Service Board meeting next week. The Strategic Plan focuses on community engagement. This will be placed in the Council Agenda Package once approved by the Police Service Board.

3. Proposal for a Paid Duty Officer in 2024 from Al Blundell, Police Service Board Chair

Al Blundell spoke to the Committee regarding his proposal and explained that this would be an overtime assignment for Officers who could sign up for these shifts to patrol in Melancthon. He also explained that we would be able to choose where we would like this paid officer to patrol in the Township. The estimated annual cost for this would be \$20,000, and some of this cost could be recouped through fines. Attached is a copy of the Proposal.

Recommendation:

The Roads Sub-Committee recommends to Council that we consider the proposal for a paid duty officer in 2024 from Al Blundell, Police Service Board Chair during budget discussions.

4. Discussion on Resuming the Road Safety Taskforce

The Committee discussed quick wins that they could focus on at the next meeting. Some of the potential quick wins discussed were black cat training for staff to assist OPP, extending the community safety zone in Corbetton to encompass the new homes built on the West End, extending the community safety zone to encompass the entire main street of Horning's Mills and make this whole stretch of road a 40km/hr speed limit. Sidewalks connecting Fieldway Court and Oldfield Court to the Village was

discussed, as well as Community engagement to raise awareness on speeding and road safety. This will be discussed further at our next meeting.

5. Reducing Speed Limits to 60km/hr on Township Roads

Member White spoke to this and did not agree with making all roads in the Township 60km/hr as all this does it create a larger speeding problem and he thinks that it makes more sense to lower speed limits on specific roads to handle specific issues. Acting Sergeant R. Button agreed with Member White that this would not be a good solution as it would create more speeders. It was discussed that we could post "shocker" statistics on our electronic sign at the Township Office to bring awareness to speeding.

6. Other/Additions

School Buses being Passed by Cars

Member White brought forward for discussion the issue of school buses being passed by cars in Corbetton on a daily basis and advised he has been receiving a lot of complaints. Discussion ensued about the red tape around the installation of cameras on school buses at the Provincial level. Member White is also going to add this item to the Police Service Board Agenda for their next meeting.

Recommendation:

The Roads Sub-Committee recommends to Council that the Township work with the surrounding Municipalities on an advocacy strategy to improve bus safety including but not limited to the installation of cameras.

Acting Sergeant R. Button – Dufferin OPP

Acting Sergeant R.Button brought forward a concern with the No Heavy Trucks By-law as he is reviewing all the By-laws for Municipalities in Dufferin County as the OPP is having issues enforcing these By-laws in Court. He advised that our By-law is enforceable, however it was suggested that the 11,000kg gross weight only deals with very large trucks and should be lowered to cover all commercial motor vehicles.

Recommendation:

The Roads Sub-Committee recommends to Council that we review the Township's No Heavy Trucks By-law.

Recommendation to Council

Recommendations are outlined above.

Public Question Period

None.

Confirmation Motion

Moved by White, Seconded by Neilson that all actions of the Members and Officers of the Roads Sub-Committee with respect to every matter addressed and/or adopted by the Sub-Committee on the above date are hereby adopted, ratified and confirmed; and each motion, resolution and other actions taken by the Sub-Committee Members at the meeting held on the above date are hereby adopted, ratified and confirmed. Carried.

Adjournment

9:56 a.m. - Moved by Neilson, Seconded by White that we adjourn this Roads Sub-Committee meeting to meet again on Monday, March 4th, 2024 at 9:30 a.m. or at the Call of the Chair. Carried.

CHAIR

SECRETARY

CORPORATION OF THE TOWNSHIP OF MELANCTHON

The Township of Melancthon Heritage Advisory Committee held an electronic meeting on February 6, 2024 at 6:30 p.m. The following members were present: Chair Ralph Moore, Vice-Chair Kristine Pedicone, Members James McLean, Todd McIntosh, Tracy Webber and Dennis Scace, also present was Becky Cunnington, Heritage Advisory Committee Secretary. Member Doug Read was absent. Chair Moore called the meeting to order at 6:32 p.m. Chair Moore advised that the meeting was being recorded and would be posted to the Township website.

Land Acknowledgement

Chair Moore shared the Land Acknowledgement Statement.

Additions/Deletions/Approval of Agenda

Additions

None

Deletions

None

Approval of Agenda

Moved by Pedicone, Seconded by McLean that the agenda be approved as presented. Carried.

Approval of Draft Minutes

Moved by Pedicone, Seconded by Webber that the minutes of the Heritage Advisory Committee Meeting held on January 9, 2024 be approved as presented. Carried.

Business Arising from Minutes

None

Declaration of Pecuniary Interest or Conflict of Interest

No declaration declared at this time.

General Business

1. Other/Addition

None

2. Unfinished Business

1) Bursary for the History Department at CDDHS

Member McLean will reach out to his contact at CDDHS and forward the Bursary information to them to be shared with Staff and Students.

2) CDDHS Student Involvement in Committee Research

Chair Moore and Member McLean will make arrangements to meet with Staff at CDDHS regarding Student Volunteer Position

3) Heritage Week 2024 - Update

Chair Moore shared that he was having difficulty finding information on his home and asked if anyone had another property in mind they could profile instead. No other suggestions were made so Chair Moore presented the idea of sharing information on the Shrigley One Room Schoolhouse as a “teaser” for the One Room Schoolhouse Project. All agreed this would be a good substitute. Member McIntosh has the Corbetton Church write up prepared and will complete the write up for the Church on 280 Sideroad. He discussed his concerns with sharing information about private residences and wondered if the Committee should reach out to make sure the current owners are ok with having their property featured. The Committee agreed it would be best to speak with the property owner, Chair Moore with reach out to them.

4) One Room Schoolhouse Project – Update

The Committee is continuing to gather information for the Project.

5. Brainstorming Roundtable

Heritage Plaque Program – Committee requested that Township Staff advertise the Program on Facebook again.

Recommendations to Council

None

Public Question Period

None.

Confirmation Motion

Moved by Pedicone, Seconded by Scace that all actions of the Members and Officers of the Heritage Advisory Committee with respect to every matter addressed and/or adopted by the Board on the above date are hereby adopted, ratified and confirmed;

and each motion, resolution and other actions taken by the Board Members at the meeting held on the above date are hereby adopted, ratified and confirmed. Carried.

Adjournment

7:23 p.m. - Moved by McIntosh, Seconded by Webber that we adjourn this Heritage Advisory Committee meeting to meet again on Tuesday, March 5, 2024 at 6:30 p.m. or at the call of the Chair. Carried.

CHAIR

SECRETARY

*Minutes for Shelburne Public Library Board Meeting
Tuesday, January 16, 2024*

Present: Geoff Dunlop Tricia Field James Hodder
 Patricia Clark Ruth Plowright Susan Graham

Also Present: Rose Dotten, CEO/Head Librarian

Regrets: Mikal Archer, Lindsay Wegener, Sharon Martin

The Chair, Geoff Dunlop, called the meeting to order at 7:00 pm, January 16, 2024.

Reading of Land Acknowledgement:

“We would like to begin by respectfully acknowledging that the Town of Shelburne resides within the traditional territory and ancestral lands of the Anishinaabe including the Ojibway, Potawatomi, Chippewa and the People of the Three Fires Confederacy. These traditional territories upon which we live, work, play and learn are steeped in rich Indigenous history and traditions. It is with this statement that we declare to honour and respect the past and present connection of Indigenous peoples with this land, its waterways and resources.

Motion 01-24 S. Graham, R. Plowright

Be it resolved that we approve the Agenda of the January 16, 2024, meeting.

Carried

Motion 02-24 S. Graham, T. Field

Be it resolved that we approve the minutes of the board meeting, as amended, dated December 19, 2023.

Carried

Motion 03-24 T. Field, J. Hodder

Be it resolved that we approve the Accounts Payable Register for December, 2023, with invoices and payments in the amount of \$36,002.02;

Carried

CEO/ Head Librarian’s Report:

o **Statistics—Including Social Media and e-resources**

Attached is a summary of the Monthly Statistics for December, 2023.

o **Programming-**

• **Children’s Programming:**

Children’s programming started on Wednesday, Jan 10/24 with Lego Time and on Friday Jan 12/24 with morning Story Time.

• **Adult Programming:**

- Coffee, Conversation & Books featuring has been cancelled for February 2024. There are more events scheduled for May and October, 2024.

- **Upcoming events are:**
 - **Archivist on the Road—Laura Camilleri**, will be at the library once a month. The first is scheduled for February 6, 2024, entitled “Using Ancestry to research Black History in Canada.”
 - **Library Literary Event** –The next event will be held at the library on Sunday, February 11/24, at 2 pm, featuring Suzette Daley, discussing her book The Lucie & Thornton Blackburn Story. This will be part of our Black History Events for February, 2024.
 - **Rose’s Book Club**—the 4th Tuesday of each month—The first meeting in 2024 will be on January 23, 2024. The club does not discuss one particular book but Rose will discuss some new books and all the participants generally discuss the various books they have read over the past month. Jade and Bev participate as schedules permit and contribute their reads of the month.
 - **Tech Help**—is being offered by a student every Friday afternoon in half-hour segments. Appointments need to be made but walk-ins are admitted if time available.
- **New Events included:**

Business

- **Correspondence**
Rose presented to the Board a resolution from Mulmur Council requesting a meeting in early 2024 with the library staff. This meeting will be arranged as soon as possible. A copy of the resolution from Mulmur is attached to these minutes.
- **Change of Bank signing Authority**

Motion 04-24 R. Plowright, S. Graham

Be it resolved that the SPL Board approves adding James Hodder to the current bank signing authorities so that it will be as follows:

Any two of Gordon Gallagher, Rose Dotten, Geoff Dunlop, and James Hodder.

Carried

- **Change of Library hours**

Motion 05-24 P. Clark, R. Plowright

To extend the library hours, as per attachment, on a pilot basis for 4 months from February 1 to May 31, 2024, to be reviewed at the May meeting.

Carried

The new hours of operation will be as follows:

Tuesday	10 am to 7 pm
Wednesday	10 am to 5 pm
Thursday	10 am to 7 pm
Friday	10 am to 5 pm

Saturday 10 am to 4 pm

Motion 06-24 T. Field, J. Hodder

That we now adjourn at 8:15 p.m., to meet again February 20, 2024, at 7 pm., or at call of the Chair.

Carried

February 8, 2024

Rural Ontario Municipal Association
Attn: Board of Directors
Via email roma@roma.on.ca

Ontario Good Roads Association
Attn: Board of Directors
Via email info@goodroads.ca

Via email

RE: return to combined ROMA and OGRA conferences

Dear ROMA & OGRA Board of Directors,

During the February 5, 2024 regular meeting of council, council in response to a notice of motion from Deputy Mayor Joel Field the following resolution passed:

MOVED: Bill Clark

SECONDED: Chad Hyatt

WHEREAS as a past attendee of combined conferences, it makes great sense for the OGRA & ROMA conferences to be returned to a combined conference effort, not only financially for the municipality but also for availability for participation of members of Council and staff; and

WHEREAS these conferences afford a vital opportunity for delegations with members of our provincial parliament, returning to a combined conference provides a better respect to their availability and participation; and

WHEREAS during the 2019 OGRA conference AGM a resolution was passed regarding the re-establishment of an annual combined conference for both OGRA & ROMA; and

WHEREAS it is understandable that little movement has happened since the resolution at the 2019 OGRA conference AGM was passed, due to delays of the COVID-19 pandemic; and

WHEREAS not all persons who wish to attend can do so in person, that a hybrid participation option be considered for the sessions;

NOW THEREFORE BE IT RESOLVED that the Council of the Town of Petrolia call upon both the ROMA & OGRA boards to re-establish a combined OGRA & ROMA annual conference.

FURTHERMORE that this resolution be forwarded to Premier Doug Ford, Minister Paul Calandra, MPP Bob Bailey and be circulated to Municipalities of Ontario; as amended

Carried

Phone: (519)882-2350 • Fax: (519)882-3373 • Theatre: (800)717-7694
411 Greenfield Street, Petrolia, ON, N0N 1R0

www.town.petrolia.on.ca



MAR 21 2024

INFO 1

Kind regards,

Original Signed

Mandi Pearson
Clerk/Operations Clerk

cc:

Premier Doug Ford premier@ontario.ca
Hon. Paul Calandra Paul.Calandra@pc.ola.org
MPP Bob Bailey, Sarnia-Lambton bob.bailey@pc.ola.org
Ontario Municipalities

Phone: (519)882-2350 • Fax: (519)882-3373 • Theatre: (800)717-7694

411 Greenfield Street, Petrolia, ON, N0N 1R0

www.town.petrolia.on.ca



From: Roxborough Developments Ltd - Eric Silverberg [esilverberg416@gmail.com]
416-801-8322

Attn: Mayor White and Melancthon Township Council

Subject: Request for Council Resolution in Support of New Development

Dear Mayor White and Members of the Melancthon Township Council,

I hope this letter finds you well. I am writing to formally seek your support and consideration for a Council resolution endorsing the development of two specific sites within Melancthon Township. The addresses of the proposed sites are as follows:

1. 4th Line & Hwy 10 Melancthon
2. 476234 Third Line Melancthon

Our development proposal for the attached Subject Properties which are in close proximity to existing urban centres, allowing for a cohesive and well-integrated development plan that we believe will bring positive enhancements to the community. Of particular benefit will be cohesive urban design and a unit mix that will allow for desperately needed attainable housing.

As part of our commitment to transparent and collaborative development practices, we have already submitted an application directly to the Minister regarding the inclusion of these lands in the new development boundaries. However, we find ourselves facing uncertainty regarding the timing for completion of the Municipal Comprehensive Review (MCR).

Recognizing the critical importance of securing local support, we are seeking a Council resolution to express Council's support for our proposed development(s). This support is vital, given that the Minister may review and make decisions on the MCR at any time and local support is of the utmost importance.

In addition, we are exploring alternative avenues to move the development forward. Specifically, we are interested in discussing the possibility of utilizing either a Minister's Zoning Order (MZO) or the Community Infrastructure & Housing Accelerator (CIHA). The CIHA process requires a Council resolution, and we understand that the resolution must identify the requested zoning relief and subject lands. The resolution, along with certain supporting information, would then be sent to the Minister, who may request additional details.

While requesting an MZO does not have specific application requirements, making a CIHA order provides flexibility by allowing the Minister to exempt necessary planning-related approvals from aligning strictly with provincial plans, the Provincial Policy Statement, and municipal official plans.

We believe that, with your valuable support and collaboration, we can navigate these options effectively and contribute positively to the growth and development of Melancthon Township.

Building upon our previous communications and emphasizing the key aspects outlined in our current documentation, our overarching objective is to establish a residential community that caters to the housing needs of both younger families and retirees. Our vision for the development is twofold: to provide affordable housing solutions for the younger demographic and simultaneously curate an inviting environment for retirees at an attainable cost.

We are confident that our vision for the development will yield positive outcomes, fostering a blend of diverse age groups within the community. By prioritizing attainable housing options, we aim to support the aspirations of younger families seeking a foothold in the housing market. Simultaneously, our commitment to creating an enriching and welcoming atmosphere aligns with the desires of retirees seeking a vibrant place to call home.

We believe that the synergy between demographics will not only contribute to the overall vibrancy of the community but also reflect positively on the social fabric of Melancthon Township. Your support in endorsing this vision through a Council resolution will play a pivotal role in bringing this innovative and inclusive development to fruition.

Thank you for your continued consideration and support as we work towards creating a community that meets the diverse needs of our residents.

To discuss this matter further and seek your guidance, we would appreciate the opportunity for a meeting with the Council. We are available at your earliest convenience to present our plans and address any concerns or questions you may have.

Thank you for your time and consideration. We look forward to the possibility of working together for the betterment of our community.

Sincerely,

Eric Silverberg
Roxborough Developments Ltd



**Enhancing Life,
One Family at a Time**



Introducing Our Lifestyle Community

Through the creation of this lifestyle community in Dufferin County, we are redefining luxury living. Geared towards adults, families and the elderly transitioning into retirement, this housing opportunity will offer an upscale lifestyle with significant relief regarding cost of living. Individuals will be able to lessen their home expenses yet own every experience, all while enjoying the numerous amenities available. The modular home concept which we have adopted is revolutionary yet simple and efficient. This lifestyle community will be expertly managed, well-maintained and an ideal place to call home.

Our Mission

There is an increasing need for community-style housing as the supply of affordable, suitable, and adequate living options in Canada has dwindled over recent years. Our solution to this problem is simple and convenient. Adhering to the current housing crisis and rapidly aging population in Ontario, we aim to provide high-end and upscale living at an affordable price. This lifestyle community is a brilliant housing solution with an emphasis on affordability, community and upscale housing plans.

Why Our Lifestyle Community?

- Upscale and Affordable
- Innovative and High-End Architectural Design
- Low-Maintenance and Convenient Lifestyle
- Peaceful Atmosphere with Natural Open Space
- Impressive Amenities and Benefits
- Environmentally Sustainable
- Strategically Located
- Health and Safety Considerations





The Demand for Our Lifestyle Community



Let's explore the increasing need for this lifestyle community in Ontario. The image to the left outlines important considerations we prioritized while conceptualizing this lifestyle community. Here, we will expand on the positive impact, both short and long-term, of this lifestyle community in shaping the quality of living and overall life satisfaction of both our individual homeowners and surrounding communities.

Affordability and Prosperity

This lifestyle community represents an important housing option and directly addresses the need for affordable living, especially for those entering retirement. In Ontario, the cost of living has increased by 43.81% within the last 20 years and is continuing to rise. The combination of an aging population and high demand for affordable housing has created a need for action. Efforts must continue in creating a proactive solution: appropriately designed, suitably located, and affordable community-style living.



Convenience and Adaptability

There are many extra burdens involved in owning and maintaining a single-detached home in the city. In addition to being more cost-effective, our modular homes will offer a more convenient lifestyle. Homeowners won't need to worry about the additional expenses and maintenance associated with personal home ownership. The property site will be located close to the highway and major roads within a short distance to the main city. For those who require continuous medical visits and easy access to health care facilities, this will be advantageous.

Health and Safety

We care deeply about the health and safety of our future homeowners. Focusing on individual needs is a high priority in designing this lifestyle community. Through the creation of our lifestyle community, we aim to promote a healthy lifestyle. Through community attributes such as clean and beautiful environmental surroundings as well as access to various amenities, we hope to promote physical activity and social interaction.

Our lifestyle community will be managed at a high standard with excellent governance to ensure the safety of our future homeowners. Individuals will be guaranteed to always live in a well-maintained and secure place. Acceptance to purchase a modular home will be application-based and individuals will be vetted. Thus, our lifestyle community will be effective in attracting trust-worthy, pro-social and like-minded people.

Lastly, while designing this lifestyle community, we are taking into account the effects of the recent Covid-19 pandemic. We aim to respond to the need for people of all ages, especially the elderly, to be able to self-isolate without putting those living within close proximity, at-risk individuals and the community as a whole in danger. With our wide lots, spacious housing structures and health protocols put in place, we will account for this health threat and others that may approach in the future. Especially when being compared to retirement-purposed housing, our lifestyle community offers a much better style of living as it prevents individuals from being clumped into small living quarters.





About Our Luxury Custom Built Modular Homes

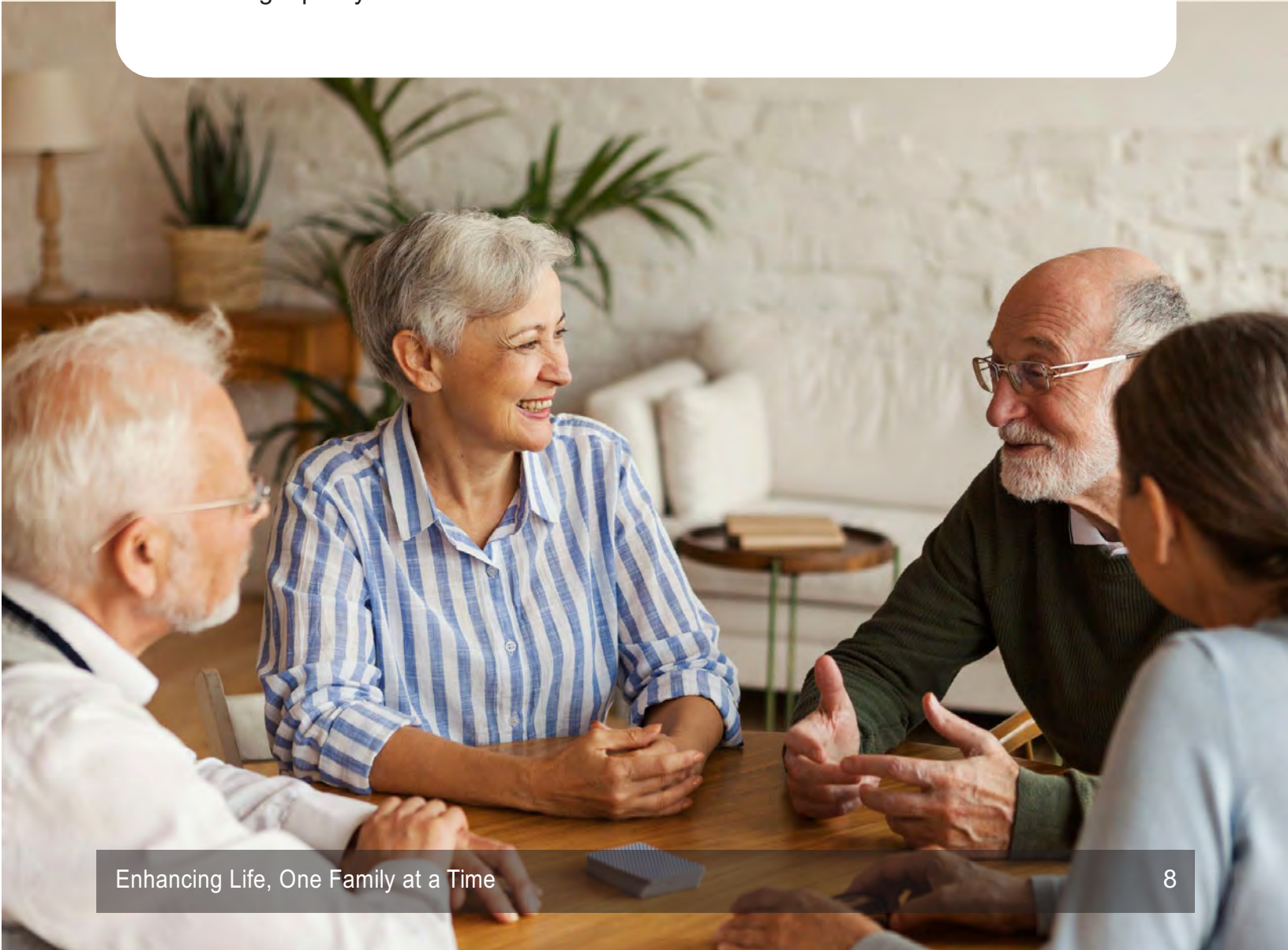
Our multi-seasonal modular homes present an exceptional housing option to individuals at all stages of life. Through careful design, we aim to craft modern and classic housing plans our clients will love. Our prefabricated housing structures will be professionally engineered and carefully crafted with high-end custom designs to ensure quality, comfort and style at a luxurious yet affordable standard. Implementing our self-imposed design regulations will ensure architectural exclusivity and consistency. With upscale building features and various floor plan options available, our modular homes will provide future residents the special opportunity of living in a high-end home built specifically for their needs at a reasonable price. For the elderly and those with physical limitations, our modular homes will be wheelchair accessible with at grade walk-outs to the yard. Placed on spacious, private parcels of land with beautiful surroundings, the result is a home that is exceptionally designed, cost effective, efficient, and unique. Due to the continuing fluctuations in construction material costs and varying lot sizes, pricing will be situationally assessed.

Environmental Considerations

We will utilize innovative housing solutions to create high-end structures and seamless finishes in the most efficient way. Assembled with environmentally sustainable building materials and precise innovative technology, our prefabricated homes will be energy efficient and eco-friendly with options of LEED Platinum and Gold certification specifications. We prioritize environmental sensitivity and thus aim to implement building technologies that limit waste and maintain a low carbon footprint. While preserving natural features of the property, we also aim to respect the environmental integrity of the surrounding communities.

Amenities and Other Benefits

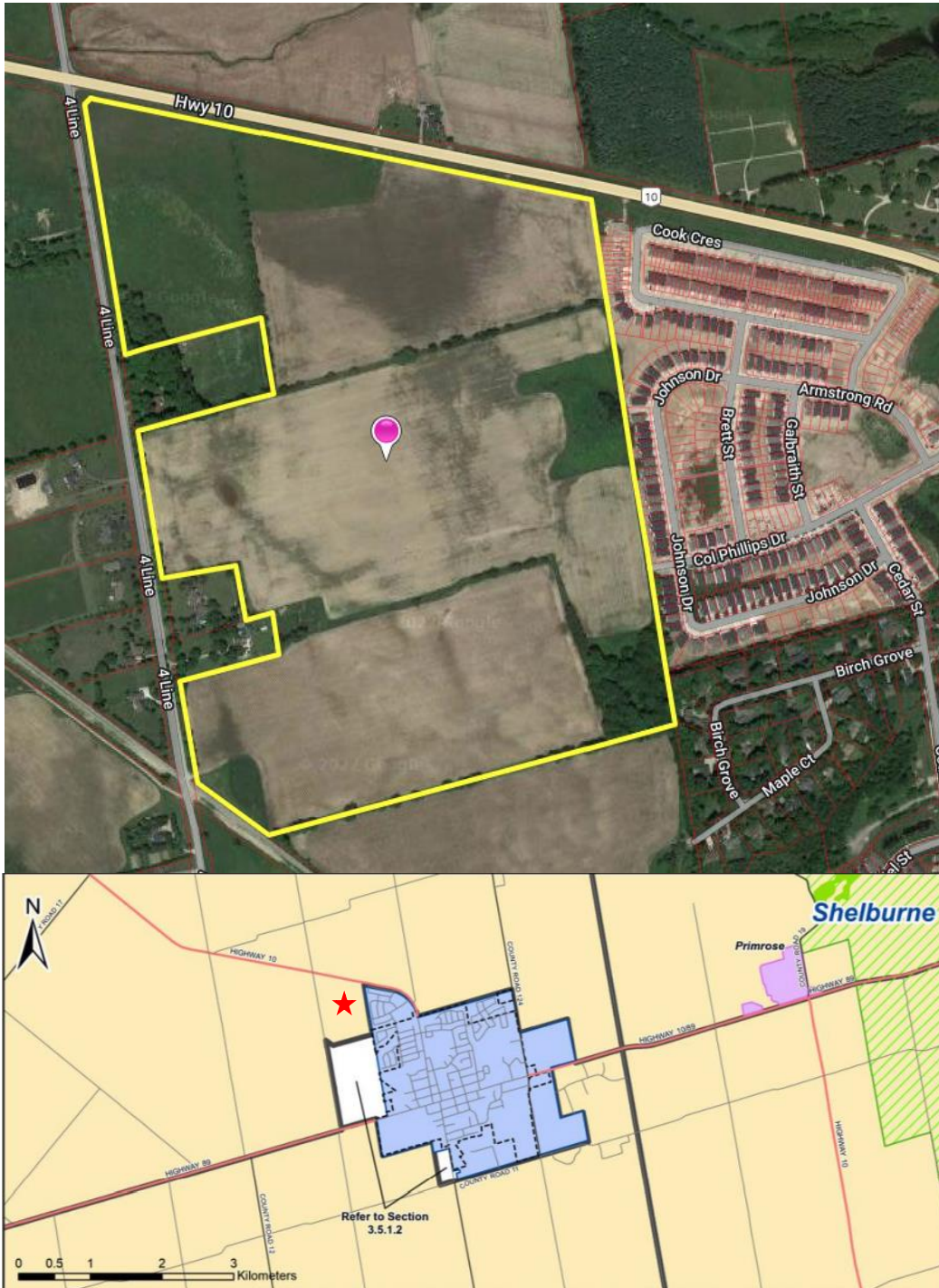
Our widely affordable and upscale lifestyle community, priced reasonably in accordance with the market and targeted demographic, will include a variety of expertly managed shared services and amenities. The wide range of unique benefits will include an outdoor theater, pool, game areas, sports facilities, vibrant social activities, park and open space, outdoor barbeque center and much more! Leveraging these conveniences all at one's fingertips will help our residents avoid the extensive recreational costs of finding these services elsewhere. Our homeowners will be able to access these amazing shared resources while still enjoying that valued element of independence in the quiet of one's own home. Through the numerous shared benefits and social opportunities presented within our lifestyle community, we aim to promote a shared sense of meaning, purpose and high quality of life.



Dufferin County

4th Line and Highway 10, Melancthon (PIN: 341330027; ROLL NUMBER: 221900000609100)

- 131 acre property in the Town of Melancthon (directly beside the Shelburne Municipal Boundary and Built Boundary).



476234 Third Line, Melancthon



- 49 acre property in Melancthon Township, Dufferin County. The Property is located north of the City of Shelburne Urban Boundary that runs along Hwy 10.
- PIN: 341330493
- The majority of the property is designated Agricultural in the Township of Melancthon and Dufferin County Official Plans. 4.4 acres at the southwest corner are designated Environmental Conservation (where the Creek runs through). 3.1 acres at the northwest corner are designated Environmental Conservation in the Melancthon Official Plan and Woodlands in the Dufferin County Official Plan (there is no water body in this area).
- Currently there is a house on the property with the majority of the land being used as a grass lawn.
- Servicing runs south of the property along Hwy 10 in Shelburne.
- A creek runs through the southwest corner of the property taking up 1.5 acres of land. The Nottawasaga Valley Conservation Authority regulates approximately 4.4 acres at the Southwest corner of the property.

476234 Third Line, Melancthon



Melancthon Official Plan Schedule A-1: Brown shows Agricultural Land. Green hatched line shows Environmental Conservation Lands. The black dotted line to the north shows that the property is outside of the Niagara Escarpment Development Control Area.



Nottawasaga Valley Conservation Authority Regulation Limit on the property.

The Honourable Doug Ford
Premier of Ontario
premier@ontario.ca

Sent via Email

February 9, 2024

Dear Premier Ford:

RE: Amendment to the Occupational Health and Safety Act to Clarify the Definition of 'Employer'

At its Regular meeting on February 7, 2024, Council of the Township of Springwater passed the following resolution:

C56-2024

That Council for the Township of Springwater endorse the resolution from the City of Greater Sudbury, and recognize resolutions from other Ontario municipalities such as the Town of Plympton-Wyoming, petitioning the province to amend the Occupational Health and Safety Act to clarify the definition of "employer" to exclude owners that have contracted with a constructor for a project ; and,

That the resolution be sent to the Honourable Doug Ford, Premier of Ontario, the Honourable David Piccini, Minister of Labour, Immigration, Training and Skills Development, the Honourable Paul Calandra, Minister of Municipal Affairs and Housing, Doug Downey, Attorney General of Ontario and MPP for Barrie – Springwater - Oro-Medonte, the Association of Municipalities of Ontario, the Council of Ontario Construction Associations, the Ontario Chamber of Commerce and all Ontario municipalities.

If you have any questions, please do not hesitate to contact us via email at clerks@springwater.ca or by phone at 705-728-4784.

Regards,

C. Sarah A. Elliott, B.A., Dipl. M.A.,
Committee Coordinator/Administrative Assistant

cc:

Honourable David Piccini, Minister of Labour, Immigration, Training and Skills Development;
Honourable Paul Calandra, Minister of Municipal Affairs and Housing;
Doug Downey, Attorney General of Ontario and MPP for Barrie – Springwater - Oro-Medonte;
The Association of Municipalities of Ontario; The Council of Ontario Construction Associations; The Ontario Chamber of Commerce and all Ontario municipalities.



The Honourable Doug Ford
Premier of Ontario
premier@ontario.ca
DELIVERED VIA EMAIL

January 15th 2024

Re: Amendment to the Occupational Health and Safety Act to Clarify the Definition of 'Employer'

Dear Premier Ford,

Please be advised that at the Regular Council Meeting on January 10th 2024, the Town of Plympton-Wyoming Council passed the following motion, supporting the resolution from the City of Greater Sudbury re. Amendment to the Occupational Health & Safety Act to Clarify the Definition of 'Employer'.

Motion 14

Moved by Councillor Bob Woolvett

Seconded by Councillor Kristen Rodrigues

That Council support item 'L' of correspondence from the City of Greater Sudbury re. Amendment to the Occupational Health & Safety Act to Clarify the Definition of 'Employer'.

Carried.

If you have any questions regarding the above motion, please do not hesitate to contact me by phone or email at ekwarciak@plympton-wyoming.ca.

Sincerely,

Erin Kwarciak
Clerk
Town of Plympton-Wyoming

cc: Honourable David Piccini, Minister of Labour, Immigration, Training and Skills Development
Honourable Paul Calandra, Minister of Municipal Affairs and Housing
Bob Bailey, MPP – Sarnia-Lambton
Association of Municipal Affairs and Housing
Ontario's Big City Mayors
Mayors and Regional Chairs of Ontario
Council of Ontario Construction Associations
Ontario Chamber of Commerce
All Ontario Municipalities

December 12, 2023

Sent Via Email

Municipalities of Ontario

Re: Amendment to the Occupational Health and Safety Act to Clarify the Definition of "Employer"

The following resolution was passed by Council of the City of Greater Sudbury on December 5, 2023:

PO BOX 5000 STN A
200 BRADY STREET
SUDBURY ON P3A 5P3

CP 5000 SUCCA
200, RUE BRADY
SUDBURY ON P3A 5P3

705.671.2489

www.greatersudbury.ca
www.grandsudbury.ca

CC2023-303: WHEREAS in 2015 the City of Greater Sudbury (the "City") entered into a contract with a contractor experienced in road construction projects to complete a project on Elgin Street in the City's downtown core;

AND WHEREAS the contract provided that the contractor would be the constructor for the project as that term is defined in the Occupational Health and Safety Act (the "Act");

AND WHEREAS an employee of the constructor operating a grader on the project struck and killed a pedestrian;

AND WHEREAS the City was charged with offences under the Act as the constructor and the employer;

AND WHEREAS after being acquitted at trial and on appeal, the Ontario Court of Appeal, in a decision issued on April 23, 2021, found the City to be liable for contraventions of the Construction Regulations as an employer as it employed quality control inspectors to monitor the quality of work on the project from time-to-time;

AND WHEREAS the Supreme Court of Canada, in a decision issued on November 10, 2023, was evenly divided 4-4 on the issue resulting in dismissal of the City's appeal;

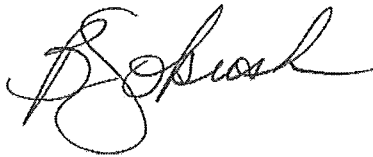
AND WHEREAS the consequence of this decision is that municipalities in Ontario, as well as all other owners of property in the province, who wish to undertake construction, are subject to being charged and convicted as an employer for offences in relation to project sites for which they have no control and have, in accordance with the Act, contracted with an entity to assume plenary oversight and authority over the work on such site as the constructor; AND WHEREAS the potential of an owner being charged as an employer as that term is defined in the Act in circumstances where it has engaged a constructor disregards and renders meaningless the owner-constructor provisions contained in the Act and presents an unacceptable level of increased risk and confusion for owners and contractors throughout the province;

AND WHEREAS the City believes that the safety of workers is paramount however the safety of workers on construction projects in Ontario is not increased by placing liability on parties that do not have control of and are not responsible for the conduct of the work on such sites;

NOW THEREFORE BE IT RESOLVED THAT the Council for the City of Greater Sudbury requests that the province amend the Occupational Health and Safety Act to clarify the definition of "employer" to exclude owners that have contracted with a constructor for a project;

AND BE IT FURTHER RESOLVED THAT this motion be provided to the Honourable Doug Ford, Premier of Ontario, the Honourable David Piccini, Minister of Labour, Immigration, Training and Skills Development, the Honourable Paul Calandra, Minister of Municipal Affairs and Housing, France Gelin, MPP for Nickel Belt, Jamie West, MPP for Sudbury, the Association of Municipalities of Ontario, the Federation of Northern Ontario Municipalities, Ontario's Big City Mayors, Mayors and Regional Chairs of Ontario, Northern Ontario Large Urban Mayors, the Council of Ontario Construction Associations, the Ontario Chamber of Commerce and all Ontario municipalities.

Yours truly,

A handwritten signature in black ink, appearing to read 'Brigitte Sobush', written in a cursive style.

Brigitte Sobush
Manager of Clerk's Services/Deputy City Clerk

- c. Members of City Council
Eric Labelle, City Solicitor and Clerk



February 13, 2024

The Honourable Doug Ford
Premier of Ontario
Legislative Building
Queen's Park
Toronto ON M7A 1A1

Delivered electronically to premier@ontario.ca

Re: Social and Economic Prosperity Review

In October 2023, the Association of Municipalities of Ontario (AMO) called upon you as Premier to agree to an update of the provincial-municipal partnership by conducting a social and economic prosperity review: a joint review of revenues, costs and financial risks and a detailed analysis of Ontario's infrastructure investment and service delivery needs.

At the regular meeting of the Western Ontario Wardens' Caucus on Friday, February 9, 2024, the Caucus supported AMO with the following resolution;

Moved by R. Ehgoetz, seconded by D. Canniff:

WHEREAS current municipal fiscal arrangements are undermining Ontario's economic prosperity and quality of life;

WHEREAS nearly a third of municipal spending in Ontario is for services in areas of provincial responsibility and expenditures are outpacing provincial contributions by nearly \$4 billion a year;

WHEREAS municipal revenues, such as property taxes, do not grow with the economy or inflation;

WHEREAS unprecedented population and housing growth will require significant investments in municipal infrastructure;

WHEREAS municipalities are being asked to take on complex health and social challenges – like homelessness, supporting asylum seekers and addressing the mental health and addictions crises;

WHEREAS inflation, rising interest rates, and provincial policy decisions are sharply constraining municipal fiscal capacity;

WHEREAS property taxpayers – including people on fixed incomes and small businesses can't afford to subsidize income re-distribution programs for those most in need;

WHEREAS the province can, and should, invest more in the prosperity of communities;

WHEREAS municipalities and the provincial government have a strong history of collaboration;

THEREFORE, BE IT RESOLVED THAT the Province of Ontario commit to undertaking with the Association of Municipalities of Ontario a comprehensive social and economic prosperity review to promote the stability and sustainability of municipal finances across Ontario.'; and

FURTHER THAT a copy of this motion be sent to the Premier of Ontario (premier@ontario.ca); Minister of Municipal Affairs and Housing (minister.mah@ontario.ca); the Minister of Finance (minister.fin@ontario.ca); and to the Association of Municipalities of Ontario (amo@amo.on.ca).” - **CARRIED**

As you know, Ontario's municipal governments provide critical services that residents rely on most every day. The ability to provide these services depends on a fiscal framework that enables municipalities to balance revenues and expenditures responsibly and fairly, reflecting local circumstances and priorities.

Municipalities across Ontario are also facing increasingly complex challenges, such as tackling homelessness and climate change, without the financial tools to solve them. In 2022, municipal expenditures outpaced provincial contributions by nearly \$4 billion in areas of provincial responsibility including social housing, long-term care, land ambulance, social services, and childcare.

This current arrangement makes it impossible for municipalities to invest in the infrastructure needed to support housing and economic growth, or to prepare for the impacts of climate change. Property taxpayers, including small business owners and seniors on fixed incomes, can't afford to pay for the province's affordability and homelessness crisis.

Taxpayers expect governments to work together to solve problems.

We look forward to collaborating with you on this critical review.

Sincerely,



Glen McNeil
Chair, Western Ontario Wardens' Caucus

cc.

Hon. Paul Calandra, Minister of Municipal Affairs and Housing, minister.mah@ontario.ca
Hon. Peter Bethlenfalvy, Minister of Finance, minister.fin@ontario.ca
Association of Municipalities of Ontario, amo@amo.on.ca
Western Ontario MPPs
Western Ontario Municipalities

Denise Holmes

From: Nancy Neale <neale@watsonecon.ca>
Sent: Wednesday, February 14, 2024 8:37 AM
To: Sarah Culshaw; Denise Holmes
Subject: New funding for Rural Communities for Housing Growth

Hi,

The following was posted today on the Municipal Information Network at the following link: [Government of Canada - Building more homes, faster and strengthening health care for rural Canadians \(municipalinfonet.com\)](https://www.municipalinfonet.com/government-of-canada-building-more-homes-faster-and-strengthening-health-care-for-rural-canadians)

You may want to provide this information to Council and investigate tapping into these funds in the future to assist in paying for the growth-related infrastructure that the DCs will not be able to recover now due to all the new exemptions, discounts & phase-ins.

GOVERNMENT OF CANADA

Building more homes, faster and strengthening health care for rural Canadians

February 14, 2024

On February 13, the Honourable Chrystia Freeland, Deputy Prime Minister and Minister of Finance, the Honourable Sean Fraser, Minister of Housing, Infrastructure and Communities, the Honourable Randy Boissonnault, Minister of Employment, Workforce Development and Official Languages, and the Honourable Gudie Hutchings, Minister of Rural Economic Development, announced the federal government's economic plan is taking action to build more homes, faster in rural communities and attract the doctors and nurses needed to improve rural health care.

First, to build on the success of the Housing Accelerator Fund, which is cutting red tape to fast-track the construction of more than 550,000 new homes over the next decade, the federal government is announcing it is finalizing agreements with more than 60 small and rural communities. Combined, these agreements will deliver more than \$176 million to fast-track the construction of over 5,300 homes in the next three years, and more than 51,000 homes over the next decade for rural Canadians.

As part of these Housing Accelerator Fund agreements, small and rural municipalities will create action plans to accelerate permitting processes and remove other barriers, to speed up construction. Municipalities will also implement initiatives to:

- unlock municipally-owned land to build homes, particularly affordable homes;
- deliver the required municipal infrastructure to enable more home construction;
- incentivize redevelopment on underused land;
- build more Accessory Dwelling Units (additional homes on a lot already occupied by a main residence); and,
- support energy efficiency to lower energy costs.

Second, to deliver stronger public health care for rural Canadians, the federal government is increasing by 50 per cent student loan forgiveness for rural doctors and nurses. This increase delivers up to \$60,000 in loan forgiveness for family physicians and family medicine residents and up to \$30,000 for nurses and nurse practitioners working in under-served rural and remote communities. Over the next decade, increased loan forgiveness is expected to attract nearly 1,200 more doctors and 4,000 more nurses to rural communities across the country.

This action will help rural Canadians find the homes they need at prices they can afford and access the high-quality, universal public health care they deserve close to home. By working with provinces and territories and municipalities to build more homes and strengthen public health care, the federal government is using all available tools to deliver for Canadians.

Quotes

"Our economic plan is building more homes, faster across the country, and it is strengthening Canada's public health care very much including in rural Canada. To build more than 51,000 new homes for Canadians in rural areas, today we announced over 60 agreements with small towns across the country. And we are investing in rural public health care by attracting thousands more of the doctors and nurses that small towns need. Together, these latest actions will keep Canada's small towns as a great place to call home."

- The Honourable Chrystia Freeland, Deputy Prime Minister and Minister of Finance

"By working together, we can help communities grow and build more homes. We're working with cities, mayors, and all levels of government, to get more homes built for Canadians at prices they can afford."

- The Honourable Sean Fraser, Minister of Housing, Infrastructure and Communities

"During the pandemic, we saw first-hand how important our health workforce is, especially in rural and remote communities. With these regulatory changes, we are improving our support for health workers as well as offering people living in Canada's under-served rural and remote communities the quality health care they need."

- The Honourable Randy Boissonnault, Minister of Employment, Workforce Development and Official Languages

Quick facts

- The \$4 billion Housing Accelerator Fund is incentivizing municipalities to make transformative changes by removing zoning barriers and ramping up housing construction. The Housing Accelerator Fund is already fast-tracking the construction of at least 100,000 homes over the next three years, and more than 550,000 homes across Canada over the next decade.
 - The federal government and rural municipalities will announce further details of the more than 60 agreements over the coming weeks.
- The Canada Student Financial Assistance Program provides Canada Student Grants and Canada Student Loans to help students pay for their post-secondary education.
 - Canada Student Loan forgiveness for family doctors, family medicine residents, nurses, and nurse practitioners only applies to the federal portion of a student loan.
 - Quebec, the Northwest Territories, and Nunavut administer their own student aid programs and will receive proportionate funding to provide comparable support.
- In February 2023, the federal government announced its 10-year health care plan, which will deliver an urgent, needed investment of nearly \$200 billion to strengthen universal public health care across the country.
- Canada's economic plan, including recent investments in the *2023 Fall Economic Statement*, is building more homes, faster, and making housing more affordable for Canadians. This plan also includes:
 - The *Affordable Housing and Groceries Act*, which removed the Goods and Services Tax (GST) on new rental housing;
 - Over \$40 billion through the Apartment Construction Loan Program, which is providing low-cost financing to support more than 101,000 new rental homes across Canada by 2031-32;
 - Over \$14 billion through the Affordable Housing Fund to build 60,000 new affordable homes and repair 240,000 homes;
 - \$4 billion through the Rapid Housing Initiative, which is expected to help build more than 15,500 affordable homes for people experiencing homelessness or in severe housing need;
 - Over \$200 million through the Federal Lands Initiative to build 4,500 new homes by repurposing surplus federal lands and buildings to housing providers at low or no cost;
 - Unlocking \$20 billion in new financing to build 30,000 more rental apartments per year by increasing the annual limit for Canada Mortgage Bonds from \$40 billion to up to \$60 billion;
 - The Canadian Mortgage Charter, which details the tailored mortgage relief that the government expects banks to provide borrowers who are facing financial difficulty with the mortgage on their principal residence;
 - The new Tax-Free First Home Savings Account, which is a registered savings account that allows Canadians to contribute up to \$8,000 per year (up to a lifetime limit of \$40,000) for their first down payment; and,
 - Nearly \$4 billion towards ending chronic homelessness, through Reaching Home, Canada's Homelessness Strategy.

Associated links

- [Canada Student Loan forgiveness for family doctors and nurses](#)
- [February 7, 2023: Working together to improve health care for Canadians](#)

Regards,

Nancy Neale, PLE

Manager

Watson & Associates Economists Ltd.

neale@watsonecon.ca

Office: 905-272-3600 ext. 234

Mobile 905-301-7235

Fax: 905-272-3602

watsonecon.ca



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Sent via email: minister.mto@ontario.ca

February 12, 2024

Hon. Prabmeet Sarkaria
Minister of Transportation

Dear Minister,

As you are aware, the Ministry of Transportation has committed to a two phase study of Highway 10 safety in Caledon and Dufferin County. We understand the first phase within Caledon is underway. Both Caledon and Mono are very concerned about road safety. Mono has passed, and Caledon has supported, our declaration of 'road safety emergency'.

Any objective review of Highway 10 must consider more than just existing design features and whether its current configuration can handle the present and future volume of traffic. Critical to any comprehensive review should be an analysis of speed, accidents and fatalities. To this end, we are inquiring whether MTO intends to take these factors into consideration and, in particular, deploy speed measuring technology on Highway 10 as part of its study.

The Town of Mono invested in 'Black Cat' technology to permit our local OPP detachment to identify speeding on local roads. It has been extremely helpful and we believe use of 'Black Cat' or similar technology on Highway 10 as part of the study and possibly going forward would result in useful data.

Finally, we are also concerned that neither Mono nor our local OPP detachment appears to have been approached by MTO for comment on data that would assist with this study. Please advise whether these elements, including use of speed measuring technology, will be part of your Ministry's review of Highway 10 in Caledon and Dufferin.

Yours truly,

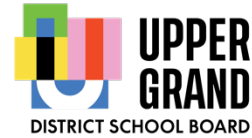
John Creelman,
Town of Mono Mayor

Copy: Mono Council
Mono Police Services Board
Sylvia Jones MPP, Dufferin-Caledon
Municipalities of Dufferin County
Town of Caledon
OPP Detachment Commanders of Dufferin and Caledon

P: 519.941.3599
F: 519.941.9490

E: info@townofmono.com
W: townofmono.com

347209 Mono Centre Road
Mono, ON L9W 6S3



Information Notice

PRIMROSE ES BOUNDARY REVIEW

To: Parents/Guardians and Partners

Date: February 15, 2024

From: Planning Department planning.info@ugdsb.on.ca

At the February 13, 2024 Board Meeting, Trustees voted to approve an enrolment cap for Primrose ES to help alleviate enrolment pressure. By establishing an enrolment cap, current Primrose ES students will not be impacted by a boundary change. This option puts a control on the enrolment numbers at Primrose ES. It also allows staff to monitor the ongoing growth at Centennial Hylands ES. Full report can be found on our [website](#).

The following motions were passed:

RESOLUTION #24-50: Moved by: Trustee Topping
 Seconded by: Trustee Hauser

THAT the Board approves an enrolment cap at Primrose ES of 23 classes starting the 2024-25 school year; and

THAT following the Elementary Staffing process each year, staff determine if the 23-classroom cap has been breached and send communication to the affected families when the student will need to be redirected to Centennial Hylands ES with transportation provided; and

THAT siblings of affected students be provided an option to either continue to attend Primrose ES or move to Centennial Hylands ES; and

THAT an acknowledgement form be provided to the families for all new students (JK to Gr 8) during registration to advise of the enrolment cap and potential redirection to Centennial Hylands ES; and

THAT staff monitor the enrolment projections at Primrose ES and Centennial Hylands on an annual basis through the Annual Long Term Accommodation Plan (LTAP) Report. If required, Staff will bring forward an alternate interim solution report to Trustees to address the accommodation pressures; and

THAT staff continue efforts to improve the Primrose site to support the additional enrolment; and

THAT the school board continues the efforts to secure a new school site to support a long-term solution for enrolment pressure.

Carried

This document is available in alternative formats upon request.



374028 6TH LINE • AMARANTH ON • L9W 0M6

February 12, 2024

Upper Grand District School Board
500 Victoria Road N.
Guelph, ON
N1E 6K2

Sent by email to: Peter Sovran c/o Amy Villeneuve, amy.villeneuve@ugdsb.on.ca

Re: Resolution on Primrose Elementary School

At its regular meeting of Council held on February 7, 2024, the Township of Amaranth Council passed the following resolution:

Resolution #: 5

Moved by: A. Stirk

Seconded by: S. Graham

BE IT RESOLVED THAT:

Whereas Township of Amaranth Council members have heard from many community members expressing concerns about the Primrose Elementary Boundary School Review process and the drinking water issues at the school;

Be It Resolved That the Council of the Township of Amaranth has concerns with the process and timing of the Primrose Elementary Boundary School Review as well as the lack of attention to the drinking water issues at the school;

And That this resolution be sent to all municipalities within Dufferin County, Sylvia Jones MPP, Premier Doug Ford and Minister of Education Stephen Lecce along with the Upper Grand District School Board

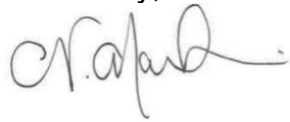
CARRIED

Please do not hesitate to contact the office if you require any further information on this matter.

MAR 21 2024

INFO 8

Yours truly,

A handwritten signature in black ink, appearing to read 'Nicole Martin', written in a cursive style.

Nicole Martin, Dipl. M.A.
CAO/Clerk

Cc:

Hon. Doug Ford, Premier

Hon. Sylvia Jones, Member of Provincial Parliament

Hon. Stephen Lecce, Minister of Education

Dufferin County Municipalities



Subject: Invitation to participate in Autism Ontario's "Fly the Flag" campaign on **April 2nd, 2024**, in celebration of World Autism Awareness Day.

Dear Ms. Holmes;

World Autism Day is fast approaching! Help us Celebrate the Spectrum for World Autism Day on April 2, 2024, and throughout April! Supporting Celebrate the Spectrum for World Autism Day this year is an excellent opportunity for your municipality to show support for autistic individuals across Ontario.

Join Autism Ontario to Celebrate the Spectrum this World Autism Day by purchasing a flag for our "Fly the Flag" campaign and formally proclaiming **April 2, 2024, as World Autism Awareness Day** to show your autism support.

Purchase a flag through our website at <https://www.autismontario.com/civicrm/contribute/transact?reset=1&id=53>.

What is Celebrate the Spectrum? Celebrate the Spectrum is our theme for World Autism Day celebrations. It is an opportunity for positive action to provide spaces of support and advocacy for our diverse communities while learning about autism and how we can all make our communities better for autistic individuals. Similar to previous Autism Ontario World Autism Day campaigns, Celebrate the Spectrum unites families, schools, communities, businesses, government, and professionals in recognizing World Autism Day by celebrating people on the autism spectrum and bringing to light the systemic barriers that must be removed to create a more supportive and inclusive Ontario.

We are always available to help with resources and ideas on how you can get involved. If you have any questions, please contact me directly, and I will gladly assist you.

Most sincerely,

Lisa Forestell
Fund and Volunteer Coordinator - Autism Ontario – Central West Region
1-800-472-7789 X 323
lisa.forestell@autismontario.com

MAR 21 2024

INFO 9

Denise Holmes

From: Jennifer Shephard <jshephard@mulmur.ca>
Sent: Wednesday, February 28, 2024 3:01 PM
To: Denise Holmes
Subject: Council Endorsement

Good Afternoon,

Please be advised that at the Mulmur Council meeting on February 7, 2024 Council passed the following motion of endorsement:

Township of Melancthon: Fire Department Radio System Project

Moved by Cunningham and Seconded by Hawkins

THAT the following items be endorsed: 12.1 to 12.5. **CARRIED.**

All the best,

Jennifer Shephard | Office & Communications Coordinator
Township of Mulmur | 758070 2nd Line E Mulmur, ON L9V 0G8 | www.mulmur.ca
Phone 705-980-1194 | Fax 705-466-2922 | jshephard@mulmur.ca

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**TRITON
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LIMITED**

Consulting Engineers

105 Queen Street West, Unit 14
Fergus
Ontario N1M 1S6
Tel: (519) 843-3920
Fax: (519) 843-1943
Email: info@tritoneng.on.ca

ORANGEVILLE • FERGUS • HARRISTON

February 29, 2024

Township of Melancthon
157101 Highway 10
MELANCTHON, Ontario
L9V 2E6

ATTENTION: Ms. Denise B. Holmes
CAO/Clerk
dholmes@melancthontownship.ca

RE: Township of Southgate
Dundalk Eco Parkway Extension
Servicing Strategy
Class Environmental Assessment
Notice of Public Information Centre
Our File: G4600A/W4613A

Dear Ms. Holmes,

You are invited to the first *Public Information Centre (PIC)* for the above noted project. This PIC will provide an update regarding the on-going Dundalk Eco Parkway Extension Servicing Strategy Class Environmental Assessment (Class EA). Formal notice of this information centre has been included. Details for the invite are as follows:

March 18th – March 24th
Virtually (online)
Township of Southgate's website
<https://www.southgate.ca/Modules/News/en>

March 21st
Public Information Centre and Open House
Frank Macintyre Building, 250 Owen Sound Street, Dundalk, Ontario
Drop-In format between 3:00 P.M. and 6:00 P.M.

Project Background:

The Township of Southgate commenced a *Schedule B Class Environmental Assessment* in May 2023 under Ontario's Municipal Class Environmental Assessment (March 2023, as

amended). The purpose of which is to develop a strategy for Sanitary and Stormwater Management Servicing in the expanded Eco Parkway development area, which includes lands identified in the Ministers Zoning Order 162/22.

This assessment is intended to conduct and compile the essential background studies, consider development needs, and identify and assess sanitary and stormwater management strategies required to support them. Subsequently, a preferred stormwater management and municipal servicing strategy will be selected and moved forward to implementation, as applicable to address the Opportunity Statement, as defined below.

“To establish a Sanitary and Stormwater Management Servicing strategy for the development area made available by the extension of Eco Parkway to ensure that development occurs in an environmentally responsible and cost-efficient manner, thereby allowing for continued economic growth of the community.”

Purpose of Public Consultation:

The purpose of this Public Information Centre is to update all stakeholders, approval agencies and Indigenous communities on the progress of the project, discuss the evaluation of alternative solutions, and invite you to provide your comments and feedback on the information presented. From March 18th to March 24th, you will be able to view background information and materials regarding the project on the Township’s website as noted. You may also choose to attend the Drop-In PIC and Open House on March 21st, details as noted above.

We look forward to receiving your comments and should you have any questions regarding this public consultation, please contact the undersigned. In your response, please confirm your preferred method for receiving future correspondence as it relates to this project.

Respectfully,

Triton Engineering Services Limited



Dustin C. Lyttle, P. Eng.
Project Manager

Encl. Notice of Public Information Centre

cc: Jim Ellis, Township of Southgate

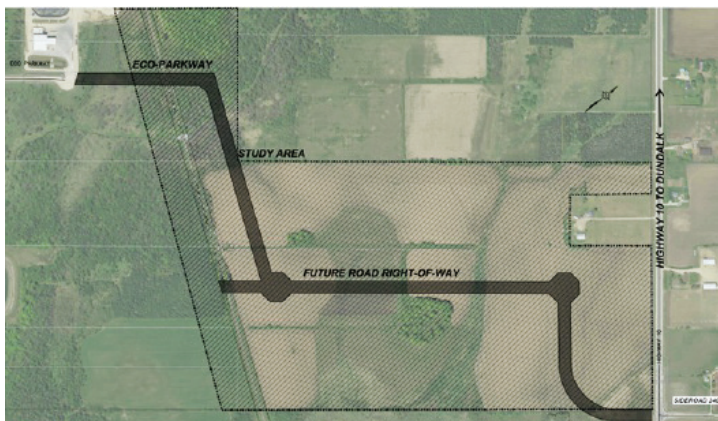


Township of Southgate Class Environmental Assessment Dundalk Eco Parkway Extension Servicing Strategy Notice of Virtual and Drop-In Public Information Centre

Project Background:

The Township of Southgate invites all community members, stakeholders, approval agencies, and Indigenous communities to participate in the Public Information Centre (PIC) for the Dundalk Eco Parkway Extension Servicing Strategy Class Environmental Assessment (Class EA).

The Township initiated a Class EA in May 2023 under Ontario's Municipal Class Environmental Assessment (March 2023, as amended). This assessment aims to develop a strategy for Sanitary and Stormwater Management servicing in the expanded Eco Parkway development area, including lands identified in the Ministers Zoning Order 162/22, as reflected in the following figure.



Public Information Centre (PIC) No. 1:

This Public Information Centre serves as a pivotal platform for the Township of Southgate to share updates regarding the ongoing Dundalk Eco Parkway Extension Servicing Strategy Class EA as it provides an opportunity for community members, stakeholders, approval agencies, and Indigenous communities to actively engage in the decision-making process.

The PIC aims to facilitate discussions on alternative solutions and welcomes valuable comments and feedback from participants. This inclusive approach ensures that diverse perspectives contribute to the decision-making process, fostering transparency and collaboration in the development of the Sanitary and Stormwater Management Servicing strategy for the expanded Eco Parkway development area, as identified in the Ministers Zoning Order 162/22.

The PIC will be conducted both virtually, accessible via the Township of Southgate's website, and in person at the Frank Macintyre Building, 250 Owen Sound Street, Dundalk, Ontario. The in-person event will be a drop-in format between 3:00 P.M. and 6:00 P.M. on March 21st. This dual format ensures accessibility and accommodates diverse preferences for engagement.

Virtual PIC Details:

March 18th – March 24th

Virtually (online)

Township of Southgate's website: <https://www.southgate.ca/Modules/News/en>

How to Respond:

If you have any questions, comments, require further information, and/or would like to be added to the project contact list, please contact both of the following:

Jim Ellis, CRS-S
Public Works Manager
Township of Southgate
185667 Grey County Road 9
Dundalk, ON
NOC 1B0
Phone: 519-923-2110 x250
Fax: 519-923-9262
Email: jellis@southgate.ca

Dustin Lyttle, P. Eng.
Project Manager
Triton Engineering Services Limited
105 Queen Street, Unit 14
Fergus, ON
N1M 1S6
Phone: 519-843-3920 x222
Fax: 519-843-1943
Email: dlyttle@tritoneng.on.ca

Information collected will be used in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

This Notice first publicly issued on **March 6th, 2024.**



374028 6TH LINE • AMARANTH ON • L9W 0M6

February 23, 2024

Hon. Doug Ford, Premier of Ontario
Hon. Prabmeet Sarkaria, Minister of Transportation

Sent by email to: Premier@ontario.ca; Minister.mto@ontario.ca

Re: Resolution on Highway 413

At its regular meeting of Council held on February 21, 2024, the Township of Amaranth Council passed the following resolution:

Resolution #: 3

Moved by: G Little

Seconded by: A. Stirk

Whereas the Township of Amaranth recognizes the importance for efficient and effective transportation networks in the Province and;

Whereas, the Province has committed to getting 1.5 millions home built within the next 10 years or less.

BE IT RESOLVED THAT:

The Township of Amaranth request that the Province of Ontario pause advancement on proposed highway 413 and redirect the approximate \$8 billion cost for highway 413 to support municipal infrastructure costs and housing construction initiatives and;

Further be it resolved that at least 50% of those funds be allocated for small urban and rural Ontario with populations less than 50,000. **CARRIED**

Please do not hesitate to contact the office if you require any further information on this matter.

Yours truly,

Nicole Martin, Dipl. M.A.
CAO/Clerk

Copy: Hon. Sylvia Jones, MPP Dufferin-Caledon sylvia.jones@pc.ola.org
Hon. Kinga Surma, MPP Etobicoke Centre kinga.surmaco@pc.ola.org
Dufferin County Municipalities

MAR 21 2024

INFO 12



Media Release

County of Dufferin
W. & M. Edelbrock Centre
30 Centre Street, Orangeville, ON L9W 2X1

For Immediate Release: Wednesday, March 6, 2024

Dufferin residents invited to share their vision for sustainable development at Community Information Session

Dufferin County invites residents to share their insights on Tri-County Green Development Standards at a Community Information Session on Tuesday March 26, 2024.

The Tri-County Green Development Standards (GDS) project is a joint effort among Grey, Dufferin, and Wellington Counties to create unified Green Development Standards that are informed by best practices, existing building credentials programs and input from stakeholder consultation.

Green Development Standards are measures for developers and builders to create thoughtful and innovative developments using sustainable design. They are a critical policy tool for municipalities to achieve their greenhouse gas (GHG) reduction targets, official plan goals and goals for sustainability, and support climate adaptation by ensuring buildings and infrastructure are constructed to be more resilient to disruptions from extreme weather events.

The March 26 Community Information Session will take place from 7 to 9 pm at the Mel Lloyd Centre (New Horizons Room) located at 67 Centre Street, Shelburne. The session will begin with a brief presentation on the GDS project, followed by an interactive workshop. Attendees will have the opportunity to ask questions, share their thoughts and actively contribute to shaping the green development standards.

Residents can register for the Community Information Session via [Eventbrite](#).

About the Project

The [Tri-County Green Development Standards](#) will establish a consistent framework across the counties of Grey, Dufferin and Wellington, making it easier for the development industry to understand and implement in their projects. The document will incorporate standards and guidelines that can be applied through all phases of development planning applications right through to construction.

Dufferin County 2023 to 2026 Strategic Plan

Climate and Environment is a priority area of the [County's Strategic Plan](#), with one of the goals under this priority area being to establish the County as a leader in climate action. Creating Green Development Standards to ensure new development is environmentally, socially and economically sustainable is key to this goal and will help the County as it works to achieve its vision of being a community that grows together.

Quotes

"Under our Strategic Plan, we are committed to establishing Dufferin County as a leader in climate action. Our collaboration across Grey, Dufferin and Wellington Counties underscores a shared commitment to sustainable development. By uniting our efforts, we aim to create a consistent framework that empowers developers, supports municipal goals and engages the community in shaping our environmental legacy."

- *Darren White, Warden, Dufferin County*

"This Community Information Session is an important opportunity for residents to actively participate in shaping the future of new development in Dufferin County. We encourage everyone to join the session, share their thoughts and contribute to the development of standards that reflect our shared values and aspirations for a greener, more resilient community."

- *Todd Taylor, Councillor and Chair, Infrastructure and Environmental Services Committee, Dufferin County*

"As our community prepares to face escalating climate impacts, Green Development Standards can ensure our buildings and infrastructure remain resilient, safeguarding communities from the disruptions of extreme weather events. They also serve as a crucial step in mitigating high-carbon lifestyles and building a legacy of environmental stewardship."

- *Sara MacRae, Manager of Energy and Climate, Dufferin County*

-30-

MEDIA CONTACT:

Megan Ball, Manager of Communications
mball@dufferincounty.ca



March 7, 2024

Planning Departments and Chief Building Officials of Township of Adjala-Tosorontio, Township of Amaranth, City of Barrie, Town of the Blue Mountains, Town of Bradford West Gwillimbury, Township of Clearview, Town of Collingwood, Township of Essa, Municipality of the Grey Highlands, Town of Innisfil, Township of Melancthon, Town of Mono, Township of Mulmur, Township of Oro-Medonte, Town of Shelburne, Township of Springwater, Town of New Tecumseth, Town of Wasaga Beach

Re: Legislative and Regulatory Changes Affecting NVCA Plan Review and Development Permitting (Effective April 1, 2024)

On February 16, 2024, a new Minister's regulation (Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits) under the *Conservation Authorities Act* (CA Act) was approved by the Province. This regulation will replace the existing individual "Development, Interference with Wetlands and Alterations to Shorelines and Watercourses" regulation (Ontario Regulation 172/06) held by Nottawasaga Valley Conservation Authority (NVCA). **The new regulation is expected to come into effect April 1, 2024.** The enactment of O. Reg. 41/24 will also coincide with the proclamation of associated sections within the CA Act.

While O. Reg. 41/24 represents a single regulation for all Conservation Authorities (CAs), much of the CA regulatory process and requirements remain the same. The administration of O. Reg. 41/24 is a Mandatory Program and Service of CAs as per Section 21.1.1 of the CA Act, and as stipulated in [O. Reg. 686/21: Mandatory Programs and Services](#). In addition, under section 8 of O. Reg. 686/21, CAs shall provide programs and services to ensure that they carry out their duties, functions and responsibilities to administer and enforce the provisions of Parts VI and VII of the CA Act and any associated regulations.

NVCA will continue to require Section 28 permit applications from property owners in order to receive permission for activities that are otherwise prohibited within regulated areas, as defined under the CA Act and in O. Reg. 41/24.

TRANSITION AND IMPLEMENTATION ACTIVITIES

Currently, NVCA staff are working on a transition plan for permit applications and appeals received before the new regulations come into effect. Once developed, we will be sure to further inform and coordinate with your staff to ensure a smooth transition and avoid delays to subsequent approval processes for municipal development and building permit applications.

Permitting - Key Regulatory Administration and Process Changes

While much of NVCA's regulatory process and requirements remain the same, some key changes that may be of interest for our municipal partners include:

- The definition of a "watercourse" has been amended from "***an identifiable depression in the ground in which a flow of water regularly or continuously occurs***" to "***a defined channel, having a bed and banks or sides, in which a flow of water regularly or continuously occurs***" – this new

definition resembles the former definition of a watercourse prior to past CA Act and regulatory changes;

- The regulated area around wetlands (“other areas”) will be consistent at 30 m, including around provincially significant wetlands (PSWs). The current buffer is 30 m from wetlands, and 120 m from PSWs;
- New exceptions for certain low-risk activities that meet specific requirements;
- New prescribed process and timelines for pre-consultation and deeming a permit application complete/incomplete (21 days);
- New prescribed timelines for CAs to make decisions on all permit applications regardless of size of development, once the application has been deemed complete (90 days); and
- New additional review and appeal mechanisms including:
 - CA administrative review for application completeness or requirements.
 - CA review of application fee and/or appeal to Ontario Land Tribunal (OLT).
 - Appeal a CA permit decision (or non-decision) to OLT.
 - MNRF review of a CA permit decision (including conditions).

These expected changes will require NVCA to review and update our regulatory mapping (as appropriate) to reflect the new requirements. Municipalities are advised that NVCA’s regulatory mapping which has been shared for screening purposes may require updates, and in the interim, NVCA staff may need to undertake site visits to further confirm the extent of regulated features and areas.

Permitting – Policy, Manuals and Procedural Document Updates

Over the coming weeks, it is our intent to prepare a transition plan to scope a policy, mapping and procedural conformity exercise to ensure compliance with the updated legislative and regulatory changes coming into effect April 1, 2024. Once underway, we will be reaching out to all our watershed stakeholders, including municipal partners, for input on any draft documents prior to the NVCA Board of Directors considering them for approval, where necessary.

Plan Review and Plan Input Services

There are no material changes to NVCA’s plan review or plan input services at this time.

Municipalities must continue to circulate NVCA on *Planning Act* applications for reviews related to natural hazard management and wetland related matters, and for proposals under Acts referred to in Section 6 (2) of Ontario Regulation 686/21: Mandatory Programs and Services.

Through our plan review and plan input programs, NVCA staff will coordinate with municipal staff to provide input and support on a wide range of matters, beyond those only related to natural hazard management. This includes natural heritage and water resource protection where the activity is not directly related to an application submitted under a prescribed act (pursuant to Ontario Regulation 596/22). Discussions may include municipal strategic and master planning exercises, watershed planning and subwatershed study activities (and supporting documents), development of watershed planning implementation tools (e.g., technical guidelines, protocols and GIS tools), and training and knowledge transfer.

Fee Schedule

The [current fee schedule](#) remains applicable, and meets the requirements of the Minister’s List of classes of programs and services in respect of which CAs may charge a fee. The MNRF has issued direction to freeze CA fees for planning and permitting for 2024, so no increase or changes to NVCA’s existing fees will be made during this time.

We look forward to continuing our strong working relationship and pursuing opportunities to further streamline development approval processes, while improving the health of the Nottawasaga Watershed for the enjoyment and protection of watershed residents. We will continue to be in contact as we work to transition to this new legislative and regulatory framework. If you have any questions or concerns, please feel free to contact the undersigned.

Sincerely,

Ben Krul
Manager, Development Planning and Permits



Grand River Conservation Authority

Summary of the General Membership Annual General Meeting – February 23, 2024

To GRCA/GRCF Boards and Grand River watershed municipalities - Please share as appropriate.

Action Items

The Board approved the resolutions in the following reports as presented in the agenda:

- GM-02-24-12 - Canadian Heritage River 30th Anniversary Planning Update
- GM-02-24-10 - Afforestation Services for Spring 2023
- GM-02-24-09 - Elora Gorge Pines Trailer Staging and Sanitary Release Station
- Report and Recommendations of the Audit Committee
- Approval of Financial Statements and Report of the Auditor
- Budget 2024 and Presentation of Budget Estimates for the Current Year
- Appointment of Auditors for the year ending December 31, 2024
- Provision for Borrowing (Pending Receipt of Municipal Levies)

Information Items

The Board received the following reports as information:

- GM-02-24-15 - Current Watershed Conditions
- GM-02-23-09 - Cash and Investment Status

Delegations

There was one unregistered delegation:

- Laura Murr – 2024 Budget items

Correspondence

The Board received the following correspondence:

- Guelph/Eramosa Township re Everton Millstone Retrieval

Source Protection Authority

The General Membership of the GRCA also acts as the Source Protection Authority Board. No meeting was held this month.

Committee Appointments

The Board appointed members and officers to the following committees:

- Audit Committee
- Conservation Ontario Council Representatives

For full information, please refer to the [February 23 Agenda Package](#). Complete agenda packages and minutes of past meetings can be viewed on our [online calendar](#). The minutes of this meeting will be posted on our online calendar following the next meeting of the General Membership scheduled on March 22, 2024.

You are receiving this email as a GRCA board member, GRCF board member, or a Grand River watershed member municipality. If you do not wish to receive this monthly summary, please respond to this email with the word 'unsubscribe'.

MAR 21 2024

INFO 15



February 26, 2024

By Email: dholmes@melancthontownship.ca;

Township of Melancthon
Office of the Mayor and Council
157101 Highway #10
Melancthon ON L9V 2E6

Dear Township of Melancthon Council

Re: Canadian Heritage River 30th Anniversary Planning

The Grand River and its major tributaries - the Conestogo, Eramosa, Nith and Speed rivers - were designated Canadian Heritage Rivers in 1994. The designation recognizes the outstanding human heritage values and excellent recreational opportunities along the rivers.

The Canadian Heritage River System was established in 1984 by the federal, provincial and territorial governments. The goal is to conserve and protect the best examples of Canadian river heritage, to give them national recognition and to encourage the public to enjoy and appreciate them.

The year 2024 marks the 30th anniversary of this special status. This milestone collectively offers us a 'grand' opportunity to celebrate the national status of our rivers, the common threads that link our communities, landscapes, and cultural features throughout the watershed.

The GRCA will be celebrating this occasion with a family event at the Brant Conservation Area. Likewise, I invite your municipality to consider celebrating your Canadian Heritage River. These are just a few ideas for celebratory activities:

- incorporating commemorative activities and the heritage river theme into your existing 2024 community events such as environmental or cultural events, statutory holiday celebrations, Doors Open activities, festivals, interpretative walks or bike rides, or
- working with community groups on events such as river clean-ups and tree planting.

For more information about the Canadian Heritage River designation, visit [Heritage River designation - Grand River Conservation Authority](#).

Should your municipality decide to incorporate special heritage river celebrations in your community activities, please forward your list of activities to Janet Ivey, phone: (519) 621-2763 ext. 2128 or email: jivey@grandriver.ca for our records and for inclusion in reporting to the Canadian Heritage River Secretariat.

Yours very truly,

A handwritten signature in black ink, appearing to read "Chris White".

Chris White, Chair



Administration Centre: 400 Clyde Road, P.O. Box 729 Cambridge, ON N1R 5W6

Phone: 519-621-2761 Toll free: 1-866-900-4722 Fax: 519-621-4844 www.grandriver.ca

SEMI-ANNUAL GROUNDWATER MONITORING AND SAMPLING REPORT 2023

**Township of Melancthon Landfill Site
Lot 12, Concession 4
Melancthon Township, Ontario**

Project No. BG-850

Prepared for:

**The Corporation of the Township of Melancthon
157101 Highway 10,
Melancthon, ON.
L9V 2E6
ATTN: DENISE HOLMES, CAO/CLERK**

FEBRUARY 2024



MAR 21 2024

INFO 17

BLUEWATER GEOSCIENCE CONSULTANTS INC.

42 Shadyridge Place
Kitchener, Ontario
N2N 3J1

Tel: (519) 502-8947
www.bluewatergeoscience.ca
E-mail: blemieux@rogers.com

February 8, 2024

The Corporation of the Township of Melancthon
157101 Highway 10,
Melancthon, Ontario L9V 2E6
Attn: Ms. Denise Holmes, CAO/Clerk

Dear Ms. Holmes:

**Re: 2023 Semi-Annual Groundwater Monitoring and Sampling Report,
Township of Melancthon Landfill Site, Lot 12, Concession 4
Melancthon Township, Ontario**

Bluewater Geoscience Consultants Inc. (Bluewater) was retained by The Corporation of the Township of Melancthon to complete the 2023 Semi-Annual Groundwater Monitoring and Sampling Report for the Melancthon Township landfill property located on Lot 12, Concession 4 in Melancthon Township, Ontario. The Township operates a municipal landfill site at the property and requires the Groundwater Monitoring and Sampling Program for their MECP Certificate of Authorization (C of A) for the operation.

The scope of work, observations, analytical test results, and our conclusions and recommendations for the 2023 Semi-Annual Groundwater Monitoring and Sampling Report are presented in the following report.

We trust that this report is complete within our terms of reference and suitable for your present requirements. If you have any questions or require further information, please do not hesitate to contact our office.

Sincerely,
BLUEWATER GEOSCIENCE CONSULTANTS INC.



Breton J. Lemieux, M.Sc., P.Geo. QP_{ESA}
President, Senior Geoscientist

BLUEWATER GEOSCIENCE

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1.0 INTRODUCTION

The Corporation of The Township of Melancthon (Township) retained Bluewater Geoscience Consultants Inc. (Bluewater) to complete the 2023 landfill (LF) groundwater monitoring and sampling program and to generate the annual report detailing the findings. The landfill site monitoring was undertaken to continue to assess any environmental impacts to groundwater created by the LF operations. This landfill monitoring report was completed in accordance with the requirements of the Ministry of the Environment, Conservation and Parks (MECP) Certificate of Approval for the LF site.

The site monitoring included completing two site inspections, measuring groundwater levels in all 34 observation wells during the Spring and Fall of the year and determination of the resulting groundwater flow patterns in and around the LF. Groundwater sampling was conducted on 19 selected sampling wells during both the Spring and Fall of each year. The groundwater samples for 2023 were submitted to a CAEAL-accredited analytical laboratory for analysis. The results of the completed laboratory analyses were compared to MECP's Ontario Drinking Water Standards (ODWS) (for on-site monitors) and the Reasonable Use Policy (RUP) for off-site monitors.

2.0 PREVIOUS INVESTIGATIONS

2.1 R.J. Burnside & Associates Limited – Annual Groundwater Monitoring Reports 1993-2000

Annual groundwater monitoring reports for the LF were completed by R.J. Burnside & Associates Limited (Burnside) from 1993 – 2000. These reports included the sampling and analysis of groundwater samples from seventeen existing monitoring wells located in and around the LF site. Eleven of the monitors are located in the overburden aquifer while six are installed within the underlying bedrock aquifer. A summary of these reports indicates that no exceedance of the MOE RUP had been determined during the groundwater sampling events. In general, on-site monitoring locations indicated that exceedance of the MOE's ODWS for on-site monitors were rare and not sustained.

2.2 Rubicon Environmental Inc. – Groundwater Monitoring and Hydrogeological Investigations – Spring 2001

During 2001 Rubicon added another fourteen groundwater monitors to the existing network of monitors in and around the LF site. Eight of these monitors were installed in the overburden aquifer while six were installed in the bedrock aquifer.

During the 2001 investigations, the existing monitoring wells installed by Burnside were sampled and analysed. The additional monitoring wells were tied into the site survey, but not sampled.

2.3 Rubicon Environmental Inc. – Groundwater Monitoring and Hydrogeological Investigations – Spring 2002

This report included results of the Spring and Fall 2002 site monitoring and groundwater sampling and analysis program. The monitoring and sampling included the new monitors added during 2001.

2.4 Rubicon Environmental Inc. – Landfill Monitoring – March 24, 2004

This report provides details of the 2003 LF groundwater monitoring and sampling program completed at the site. The report details that some minor exceedances of the ODWS were determined for on-site monitoring wells.

2.5 Bluewater Geoscience Consultants Inc. – Annual Groundwater Monitoring and Sampling Reports 2004 - 2022

These reports detail the 2004 - 2022 LF groundwater monitoring and sampling program completed at the site. The report details that some minor exceedances of the ODWS were determined for on-site and off-site monitoring wells.

3.0 SITE BACKGROUND

The LF site has been in operation since ~1973 at its current location at Lot 12, Concession 4, Township of Melancthon, County of Dufferin. The LF serves the population of ~2,400 people in the Township. The nearest residence is located ~450 m south of the LF site. The location of the LF is remote and distant from any significant population centres.

The LF presently operates under Provisional Certificate of Approval (C of A) A180703. The total LF property comprises an area of ~33.038 ha., of which 6.1 ha. has been approved for landfilling. During 2013 the County of Dufferin assumed waste collection and disposal services in the Township of Melancthon. Further waste disposal at this landfill is not anticipated should County of Dufferin services be found adequate.

3.1 Site Inspection

During both Spring and Fall monitoring events, a site inspection was completed. The main refuse disposal area has been covered with soil and grades have been established to reduce the amount of rainwater infiltration into the waste pod. Temporary fencing has been placed around portions of the fill area to control windblown waste. There was no waste placement at this landfill during 2023.

During the Spring 2006 inspection it was noted that OW-4S had been destroyed, likely by equipment working in the area. OW-4S is located within the current filling are. During the Fall inspection it was noted that OW-4D had been destroyed during the summer months. OW-4D was also located within the current filling area. During 2015, monitor OW-17 was destroyed and is no longer part of the monitoring network.

4.0 GROUNDWATER MONITORING WELLS AND METHODOLOGY

4.1 Existing Monitoring Wells in 2023

Thirty-four groundwater-monitoring wells were in existence at the commencement of the 2023 monitoring period. All wells were inspected and found to be in good order, with the exceptions noted just above.

Seventeen monitoring wells had been installed by Burnside pre-2001. Six of these were installed in the deeper bedrock aquifer (denoted “D” for deep) while eleven were installed in the shallow overburden aquifer (denoted “S” for shallow). All existing monitoring wells were constructed of 50 mm diameter Schedule 40 PVC pipe and are fitted with steel protective casings and locks. The locations of all monitoring wells are presented on the Base Site Plan (Figure 1B, Appendix A). A brief description of each monitor locations is provided below:

- OW 1 is installed in the overburden aquifer and is located between two former refuse disposal areas
- OW 2S and OW 2D are located downgradient (east) of the current refuse disposal area
- OW 3S and OW 3D are located immediately downgradient (east) of the current refuse disposal area
- OW 4S and OW 4D are no longer present
- OW 5S is installed in the overburden aquifer and is located north of the disposal area, near the northern property boundary. This monitor is frequently dry in Fall
- OW 6S and OW 6D are located near the south property boundary and had been intended to represent background water quality
- OW 7S and OW 7D are located near the northeast property corner, northeast of the former refuse disposal area
- OW 8 is installed in the overburden aquifer and is located in the main refuse area. OW 8 is considered a ‘leachate’ well
- OW 9S and OW 9D are located off-site, northeast of the landfill and in the east ditch of the 4th Line
- OW 10S and OW 10D are located east of the main refuse disposal area
- OW 11S and OW 11D are located northwest of the main refuse disposal area. These monitors were intended to provide further clarification of groundwater flow patterns and are not included in the sampling program
- OW 12S and OW 12D are located west of the main refuse disposal area. These monitors were intended to provide further clarification of groundwater flow patterns and have been included since the 2006 sampling program;
- OW 13S and OW 13D are located immediately south of the main refuse disposal area. These wells were located to provide better delineation of the groundwater mounding in the refuse area and provide chemical data south of the refuse area;
- OW 14S is located southeast of the main refuse disposal area and was intended to help clarify groundwater flow patterns distant from the refuse disposal area;
- OW 15S and OW 15D are located southeast of the main refuse disposal area and were intended to help clarify groundwater flow patterns distant from the main refuse disposal

- area. These monitors were sampled for the first time during 2006;
- OW 16S and OW 16D are located along the north property boundary. These monitors were intended to provide clarification of groundwater flow patterns and provide chemical analysis of groundwater at the north property boundary. These monitors were sampled for the first time during the 2006 program;
 - OW 17S is located off-site in the overburden aquifer. The monitor is located in the east ditch of the 4th Line. This monitor was intended to provide better information on shallow groundwater flow patterns and potentially provide chemical data regarding the contribution of road salt to noted groundwater impacts. This monitor was destroyed in 2015 and has not been replaced;
 - OW 18S and OW 18D are located off-site east of the 4th Line. These monitors were intended to help refine groundwater flow patterns in the overburden and bedrock aquifers and provide chemical data in that area.

4.2 Wells Installed in 2006

During 2006 an additional six monitoring wells were installed at the landfill. The six new wells consisted of three sets of two wells (OW-19S and 19I, OW20S and 20D and OW-21S and 21D). The locations of the new wells are shown on Figure 1B, Appendix A. A description of the location and rationale for each of the new wells is presented below:

- OW-19S and OW-19I are located in the southeast corner of the landfill property, just west of the 4th Line. These wells were installed to provide additional points for determining groundwater flow patterns and to provide chemical data at this downgradient property boundary. OW-19S is set in the shallow till overburden while OW-19I (intermediate) is set in a lower till unit. These two wells were included in the 2007 sampling and lab analysis program for the first time;
- OW-20S and OW-20D are located just southeast of the ‘old closed landfill’ in the northeast portion of the landfill property. These wells will provide further groundwater flow data as well as providing additional chemical data. OW-20S is set in the shallow overburden, just above the bedrock. OW-20D is sealed into the bedrock. These two wells were included in the 2007 sampling and lab analysis program for the first time;
- OW-21S and OW-21D are located along the north landfill property boundary, well west of the active landfilling area. These wells will be utilized to provide additional groundwater flow information as well as providing chemical data at locations well upgradient of the fill area. OW-21S is set in the shallow overburden, just above the bedrock. OW-21D is sealed into the dolostone bedrock. These two wells were included in the 2007 sampling and lab analysis program for the first time;

All groundwater-monitoring wells have been surveyed relative to a geodetic datum and ground surface and top of monitoring well pipe elevations have been recorded. During 2006, waste placement was taking place in the immediate area of OW-4S and OW-4D. These wells were destroyed by the heavy equipment. OW-17 was destroyed during the winter of 2014-2015 and is no

longer part of the monitoring network.

4.3 Water Level Monitoring

On May 5 and October 18, 2023 groundwater levels were measured in all 34 existing monitoring wells installed at the LF. The depth to water relative to the top of monitoring well pipe was measured using a Solinst water level gauge. The determined water depths were recorded and the resulting groundwater elevations were determined. Table 1, Appendix B provides the tabular representation of the groundwater elevation data, including historic groundwater levels.

After completion of the water level measurements, the monitors selected for sampling were thoroughly purged of a minimum of 3 casing volumes of water in anticipation of the groundwater sampling.

4.4 Groundwater Sampling

The 2023 groundwater sampling and analysis program consisted of sampling 19 selected groundwater monitoring locations at and around the LF property. Samples were obtained from both overburden and bedrock aquifer wells. Prior to obtaining the groundwater samples, the selected monitors had been purged of a minimum of three casing volumes of water in order to facilitate provision of representative samples.

Groundwater samples from the selected monitoring wells were obtained using dedicated Waterra tubes and foot valves and were placed directly into the laboratory-supplied sample bottles. The groundwater samples were obtained and submitted for analysis of the volatile organic compounds (VOC's), general water chemistry and heavy metals parameters. The heavy metal samples were field filtered and preserved. The groundwater samples were chilled in coolers prior to being submitted under Chain of Custody to ALS Laboratories of Waterloo, ON for analysis. ALS is a CAEAL (Canadian Association of Environmental Analytical Laboratories) accredited laboratory.

4.5 Surface Water Sampling

Surface water sampling was not completed during the 2023 monitoring program.

4.6 Groundwater Flow

The determination of groundwater flow patterns in both overburden and bedrock aquifers are essential in determining the potential for off-site impacts and contaminant distribution. In general, groundwater levels in both overburden and bedrock aquifers were lower (~1m) in the Fall than the Spring monitoring. The measured groundwater elevations for each aquifer were determined and plotted on the site plan. The resulting groundwater flow patterns were determined based on this distribution. Figures 2 and 3 present the groundwater flow patterns for the Spring monitoring while Figures 4 and 5 provide the Fall 2023 aquifer flow patterns.

As may be noted from these Figures, mounding of groundwater in both aquifers within the refuse disposal area is occurring. This phenomenon is typical of landfill sites and should be expected to continue. The mounding creates radial flow, outwards, apparently in all directions away from the refuse disposal area. The flow then comes under the influence of background flow patterns. Based on the findings of this, and previous, monitoring events, the overburden groundwater flow is towards the northeast while the bedrock groundwater flow is more-directly eastwards.

Groundwater flow is driven by the gradient of the groundwater. This produces head differences between locations creating the conditions for groundwater movement. The horizontal hydraulic gradient in the overburden aquifer has been determined to be on the order of 0.007 m/m. Based on this gradient, and the characteristics of the overburden, the lateral groundwater flow velocity may be approximately 74 m/yr. The horizontal hydraulic gradient in the bedrock aquifer is lower; approximately 0.002 m/m. Based on this gradient and the characteristics of the aquifer, velocities of approximately 0.03 m/yr are estimated.

Vertical hydraulic gradients between the overburden and bedrock aquifers create the conditions for downward migration of groundwater impacted in the refuse disposal area. Downward vertical gradients allow downward movement of water into the bedrock aquifer. Downward vertical gradients are found in the refuse disposal area allowing shallow impacted groundwater to potentially enter the bedrock aquifer. This is significant because the bedrock aquifer is utilized as a potable water source within the Township and the bedrock aquifer is less able to attenuate groundwater contaminants.

5.0 GROUNDWATER QUALITY

5.1 Groundwater

Groundwater sampling and analysis for the LF site has been undertaken since 1993. Additional wells were added to the sampling regime in 1999 and selected monitoring wells installed in 2001 were added to the sampling list during 2002. Groundwater quality data for the 2023 program are provided in the Tables in Appendix B along with chemistry data from 2016 - 2022. Copies of the detailed Certificates of Analysis for the 2023 monitoring data are provided in Appendix C.

Inorganic parameters such as chloride, sulphate, hardness and alkalinity are frequently utilized to determine the extent of landfill leachate impacts in groundwater. Hardness and alkalinity are naturally elevated at the landfill property and throughout Melancthon Township. Chloride levels in both overburden and bedrock aquifers are elevated in the refuse disposal area. In general, concentrations in the bedrock aquifer are slightly higher than in the associated overburden wells. This is a reflection of the downward gradient from the overburden to the bedrock coupled with the lower attenuation capabilities in the bedrock. None of the on-site or off-site monitors exceeded the MECP ODWS concentration for chloride during the 2023 monitoring events. None of the wells sampled during 2023 exceeded the MOE RUP for chloride (125.5 mg/L) concentration. Elevated chloride concentrations in this vicinity of the 4th Line, east of the LF, may be partially attributable to the application of road salt during winter.

In general, the background groundwater quality at the LF site consists of hard water with elevated hardness, alkalinity, manganese and iron content. During the 202 monitoring, alkalinity concentrations in excess of the ODWS were noted at OW's 2S, 2D, 3D, 7S, 7D, 9D, 16D and 20D. Iron concentrations in excess of the ODWS were determined at all sampled wells including upgradient locations. Manganese concentrations in excess of the ODWS were determined for OW's 2S, 2D, 3S, 3D, 7S, 7D, 8, 10S, 10D, 13D, 16D, 20S and 20D. As this list includes most sampled location these elevated concentrations are likely reflective of background groundwater quality in the area. The lack of significantly elevated manganese concentrations at OW-8, which is considered a leachate well and displays elevated sulphate concentrations, further suggests that elevated manganese concentrations are not landfill related.

The sulfate concentration at OW 8 of 433 mg/L in Spring 2023 was just below the ODWS of 500 mg/L and above the RUP of 253.9 mg/L. During the Fall 2023 monitoring, OW 8 was determined to contain a sulfate concentration of 562 mg/L above both the ODWS and RUP. The elevated concentration of sulfate is likely related to leachate groundwater impacts in the main refuse disposal area. No other on-site or off-site monitor exceeded the RUP for sulphate.

Parameter concentration trends through time for sulphate, chloride and manganese for selected off-site, property boundary and downgradient wells reviewed. Manganese concentrations trends do not suggest rising levels as would be expected if landfill related. Chloride trends do not suggest rising concentrations for these wells. In fact, several locations have shown slightly declining levels over the last few years. This is likely reflective of an effort on Township personnel's behalf to reduce salting in the area of the landfill entrance after several elevated chloride concentrations were detected in past years. As suggested at that time, those past elevated chloride concentrations appear to have been affected by these road salting activities.

The sulfate concentration trends for the selected wells show generally rising concentrations at OW-2S and OW-2D. Sulfate concentrations at the other selected wells do not indicate any discernible rising trends. Sulfate concentrations are generally higher in Fall than Spring. A site plan showing concentration distribution during Spring 2023 for shallow groundwater wells is provided in Figure 6 and for deep groundwater wells is provided in Figure 8, Appendix A. A site plan showing concentration distribution for Sulfate during Fall 2023 for shallow wells is provided on Figure 10 and for deep groundwater wells is provided on Figure 12, Appendix A.

A site plan showing chloride distribution during Spring 2023 is provided in Figure 7 for shallow groundwater wells and in Figure 9 for deep groundwater wells. A site plan showing chloride distribution during Fall 2023 is provided in Figure 11 and for shallow groundwater wells and in Figure 13 for deep groundwater wells.

Trace concentrations of VOC parameters, well below ODWS's and close to method detection limits, were determined for the 2023 monitoring at OW's 2D, 3D, 7S, and 10S. While these VOC concentrations are likely landfill related, they are not considered to be of significance at this landfill.

There was a general trend towards higher parameter concentrations during the Fall monitoring compared to Spring concentrations. This is a continuing trend, consistent with past findings and normal groundwater conditions.

Bluewater has evaluated the long-term trends in groundwater quality at the LF site. Most parameter concentrations have remained fairly steady over the past several years suggesting that dilution and attenuation are dealing adequately with the refuse area derived leachate impacts.

5.2 Surface Water

Surface water sampling was not completed during the Spring or Fall 2023 monitoring.

5.3 Methane Monitoring

Methane gas is a by-product of waste decomposition and will be generated in the waste unit until all the organic matter is completely decayed. Methane, while it is a potential explosion hazard, is not a major concern provided that no building is ever permitted within approximately 30 meters of the refuse disposal area. The shallow water table and relatively permeable cover material at the Melancthon landfill are expected to prevent significant migration of methane. Gas produced by the landfill is expected to vent naturally to the atmosphere. It should be noted however, that ice, snow cover, and frozen ground in the winter may prevent methane gas from venting and cause methane gas to migrate laterally from the refuse disposal area.

If methane is present in concentrations between 5% and 15% in air it can become explosive. Below this range, there is an inadequate amount of methane for explosion. Above this range, there is an inadequate amount of oxygen for explosion. Therefore, 5% is considered the Lower Explosive Limit (LEL) and 15% is considered the Upper Explosive Limit (UEL) for methane.

Headspace methane monitoring was completed on all wells during both Spring and Fall 2023 monitoring events. The results of the methane monitoring are presented in Table 2 Appendix B. A slight detectable methane concentration was determined for OW-8 however no other of the monitors had detectable methane concentrations during the Spring or Fall 2023 monitoring events. On-going methane monitoring should be incorporated in future monitoring events.

6.0 LANDFILL VOLUMES AND CAPACITY

The Melancthon landfill has a current design capacity of 297,000 m³ on the approved 6.1 ha area. At the completion of 2012, 89,326 m³ of the total volume had been filled. The volume survey completed during October 2013 determined that the landfill volume used during 2013 was 10,636 m³ meaning the total volume used to the end of 2015 is 99,962 m³. The 2013 volume included the importation of ~ 2,000 m³ of clean fill to cover the current fill area based on the end of waste receiving at the site. No waste was added during 2023. Based on this figure, the remaining fill volume for this design is 197,038 m³.

7.0 SUMMARY AND CONCLUSIONS

The following section summarizes the findings of the 2023 Annual Groundwater Monitoring Report:

- The Township of Melancthon operates a ‘natural attenuation’ landfill site in a remote, sparsely populated area of the Township. Surrounding land use is predominantly agricultural and the nearest residence is located ~450 m south of the site;
- During 2013 The County of Dufferin assumed waste collections and disposal responsibilities for Melancthon Township. No waste was imported to the landfill during 2023. At this time, further waste placement at this landfill is not anticipated given adequate service is maintained by the County;
- Two main hydrogeological units exist in the subsurface of the site. The upper unit, referred to as overburden, consists of sand and gravel and silty sand soils. The groundwater level in the overburden is unconfined and shallow (<2m) and shows seasonal fluctuations with Spring levels generally higher than those in Fall. This fluctuation is likely the result of the addition of snow melt water during the Spring. The second, deeper hydrogeological unit is the underlying dolostone bedrock aquifer. The water level in the bedrock is generally lower than in the overburden. This creates a downward vertical hydraulic gradient that allows landfill-generated impacts to potentially enter the bedrock aquifer;
- Mounding of groundwater occurs within both hydrogeological units within the refuse disposal area. This mounding creates a radial flow pattern in the refuse area that drives flow in all directions away from the mound. The groundwater then comes under the influence of the background (natural) flow regime. Groundwater flow in the overburden aquifer is northeast towards the entrance to the landfill in the northeast corner of the property. Flow in the bedrock aquifer is more-directly to the east and the eastern property boundary;
- Comparison of the laboratory analytical data from the Spring and Fall 2023 monitoring events to the applicable ODWS and RUP objectives indicates that background water quality exceeds ODWS Standards for alkalinity, iron and manganese;
- Exceedance of the MOE RUP objectives for parameters such as hardness, alkalinity, manganese and iron were determined at most sampled locations during 2023. These concentrations are likely at least partially unrelated to landfill impacts and reflect general water quality in Melancthon Township. No chloride RUP exceedance was noted for any off-site or on-site wells. Exceedance of the RUP for other leachate-indicators such as sulfate was not noted during 2023 near property boundaries. Exceedance of the RUP and ODWS for sulfate occurred at OW-8, located immediately downgradient of the principal fill area.
- Significant methane concentrations were not determined during 2023;
- The site is currently in compliance with the terms and conditions of its C of A.

8.0 RECOMMENDATIONS

The following recommendations are made regarding the future Groundwater Monitoring and Sampling Program at the Township of Melancthon landfill site:

- Continuation of the semi-annual groundwater monitoring and sampling program including a routine site inspection, recording of static water levels at all 34 monitoring locations and groundwater sampling and laboratory analysis of the selected monitoring wells in both Spring and Fall;
- Preparation and submission of an Annual Monitoring Report to MECP for review.
- Natural dilution of contaminants derived in the refuse disposal area coupled with natural attenuation in the overburden appears to be dealing with derived groundwater impacts adequately at this time. The widespread occurrence, including upgradient locations, of ODWS and RUP exceeding manganese, iron, hardness and alkalinity concentrations appears to be more a function of natural geologic conditions than landfill-derived impacts. Lab results for monitors downgradient of the principal fill areas show more elevated chloride and sulphate concentrations, which are not similar to findings in the northeast corner of the property.
- Monitoring for headspace methane concentration in all wells should be continued for the 2024 program.

9.0 REFERENCES

Bluewater Geoscience Consultants Inc., 2005. "Annual Groundwater Monitoring and Sampling Report 2004".

Bluewater Geoscience Consultants Inc., 2006. "Annual Groundwater Monitoring and Sampling Report 2005".

Bluewater Geoscience Consultants Inc., 2007. "Annual Groundwater Monitoring and Sampling Report 2006".

Bluewater Geoscience Consultants Inc., 2008. "Annual Groundwater Monitoring and Sampling Report 2007".

Bluewater Geoscience Consultants Inc., 2009. "Annual Groundwater Monitoring and Sampling Report 2008".

Bluewater Geoscience Consultants Inc., 2010. "Annual Groundwater Monitoring and Sampling Report 2009".

Bluewater Geoscience Consultants Inc., 2011. “Annual Groundwater Monitoring and Sampling Report 2010”.

Bluewater Geoscience Consultants Inc., 2012. “Annual Groundwater Monitoring and Sampling Report 2011”.

Bluewater Geoscience Consultants Inc., 2013. “Annual Groundwater Monitoring and Sampling Report 2012”.

Bluewater Geoscience Consultants Inc., 2014. “Annual Groundwater Monitoring and Sampling Report 2013”.

Bluewater Geoscience Consultants Inc., 2015. “Annual Groundwater Monitoring and Sampling Report 2014”.

Bluewater Geoscience Consultants Inc., 2016. “Annual Groundwater Monitoring and Sampling Report 2015”.

Bluewater Geoscience Consultants Inc., 2017. “Annual Groundwater Monitoring and Sampling Report 2016”.

Bluewater Geoscience Consultants Inc., 2018. “Annual Groundwater Monitoring and Sampling Report 2017”.

Bluewater Geoscience Consultants Inc., 2019. “Annual Groundwater Monitoring and Sampling Report 2018”.

Bluewater Geoscience Consultants Inc., 2020. “Annual Groundwater Monitoring and Sampling Report 2019”.

Bluewater Geoscience Consultants Inc., 2021. “Annual Groundwater Monitoring and Sampling Report 2020”.

Bluewater Geoscience Consultants Inc., 2022. “Annual Groundwater Monitoring and Sampling Report 2021”.

Bluewater Geoscience Consultants Inc., 2023. “Annual Groundwater Monitoring and Sampling Report 2022”.

Burnside Environmental Limited, 2000. “Hydrogeological Monitoring Report, Township of Melancthon Landfill Site”

Gwyn, Q.H.I. and Frazer, J.Z., 1975a. “Drift Thickness of the Dundalk Area, Southern Ontario; Ontario Division of Mines, Preliminary Map P.306 (revised), Bedrock Topography Series, Scale 1:50,000. Geological Compilation.

Gwyn, Q.H.I. and Frazer, J.Z., 1975b. "Bedrock Topography of the Dundalk Area, Southern Ontario; Ontario Division of Mines, Preliminary Map P.306 (revised), Bedrock Topography Series, Scale 1:50,000. Geological Compilation.

MOE, August 2000. "Ontario Drinking Water Standards".

MOE, April 1994. "Incorporation of the Reasonable Use Concept into MOEE Groundwater Management Activities".

MOE, July 1994. "Policies, Guidelines, Provincial Water Quality Objectives".

MOE, 1998 "Landfill Standards"

Rubicon Environmental Inc., 2004. "Landfill Monitoring 2003, Township of Melancthon Landfill Site".

Telford, P.G., Bond, I.J. and Liberty, B.A., 1974. "Palaeozoic Geology of the Dundalk Area, Southern Ontario, Ontario Division of Mines, Preliminary Map P.946 Geological Series", Scale 1:50,000.

10.0 LIMITATIONS

This report was prepared for the exclusive use of The Township of Melancthon. This report is based on information and data collected during the completion of an environmental investigation of the Site carried out by Bluewater Geoscience Consultants Inc., and is based solely on the site conditions encountered at the time of the assessment and the applicable guidelines in place at the time of this investigation.

It should be noted that the observations and recommendations presented in this report are limited to the actual locations explored and laboratory parameters analyzed. The information presented in terms of the thickness and types of the sub-soils encountered, groundwater levels and chemical testing results, etc., are only applicable to the actual locations explored. Variations may be present between these locations. Should significant variation become apparent during later investigations, it may be necessary to re-evaluate the recommendations of this report. The results of an investigation of this nature should, in no way, be construed as a warranty that the site is free from any and all contamination from past or current practices since conditions may be different from the locations tested. This assessment was carried out using existing historical information as available from various agencies and no assurance is made regarding the accuracy or completeness of this information.

If new information is discovered during future work, including excavation, borings or other studies, Bluewater Geoscience Consultants Inc. should be requested to re-evaluate the conclusions presented in this report and to provide amendments as required. The analytical test results are assumed to be correct and performed according to all current regulations. No audit of the laboratory's methods or procedures was performed.

This assessment does not include, nor is it intended to include, any option regarding the suitability of any structure on the site for any particular function, the integrity of the on-site buildings or the geotechnical conditions on the site. Inspections of buildings do not include compliance with building, gas, electrical or boiler codes, or any other federal, provincial or municipal codes not associated with environmental concerns. Should concerns regarding any issue other than environmental matters arise as a result of our investigations, appropriately qualified professionals should address them.

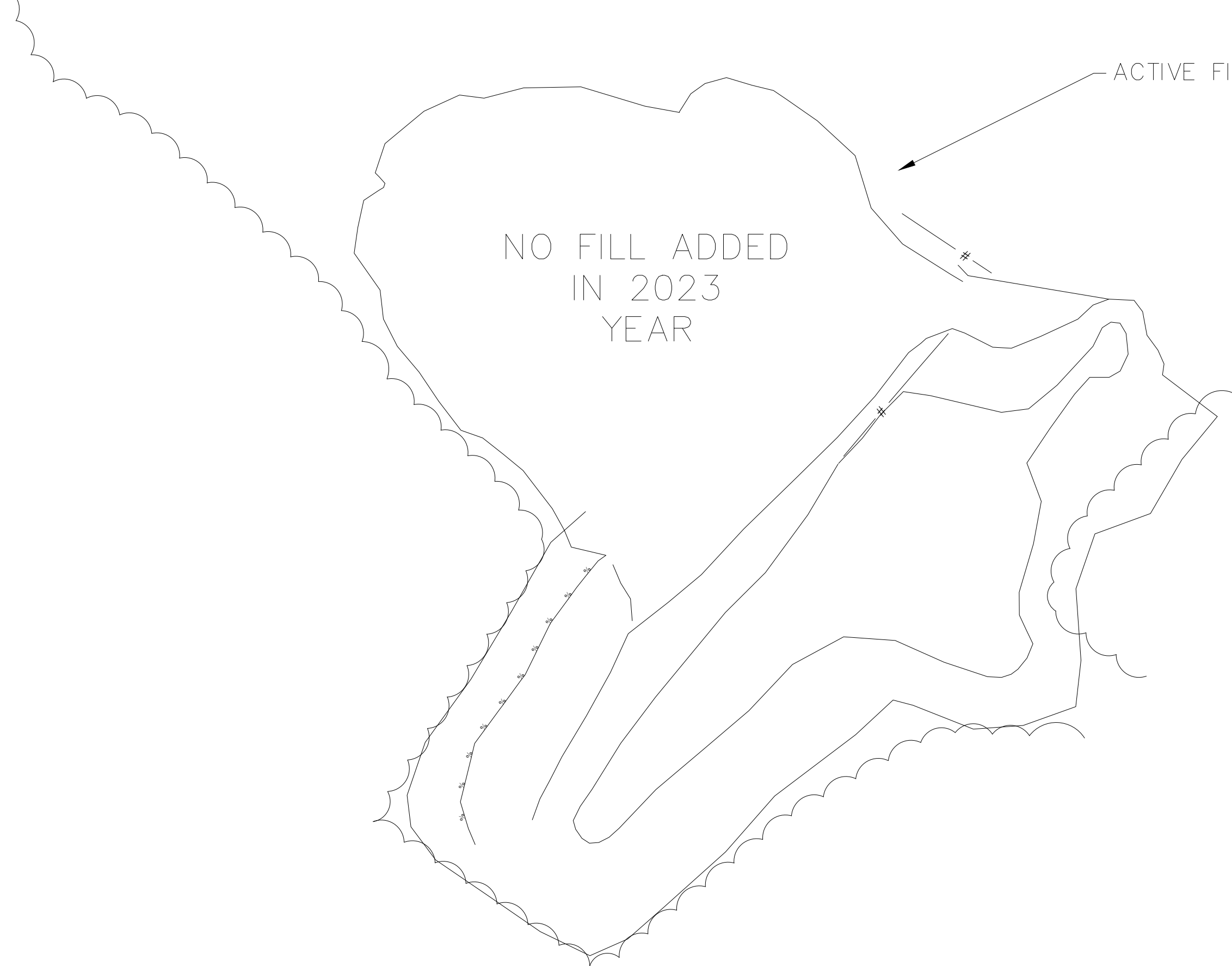
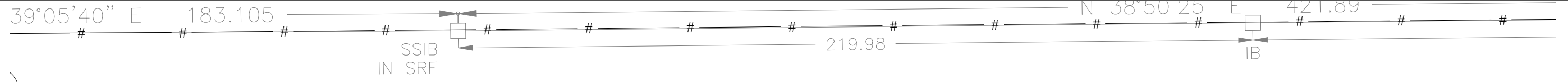
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11.0 CLOSURE

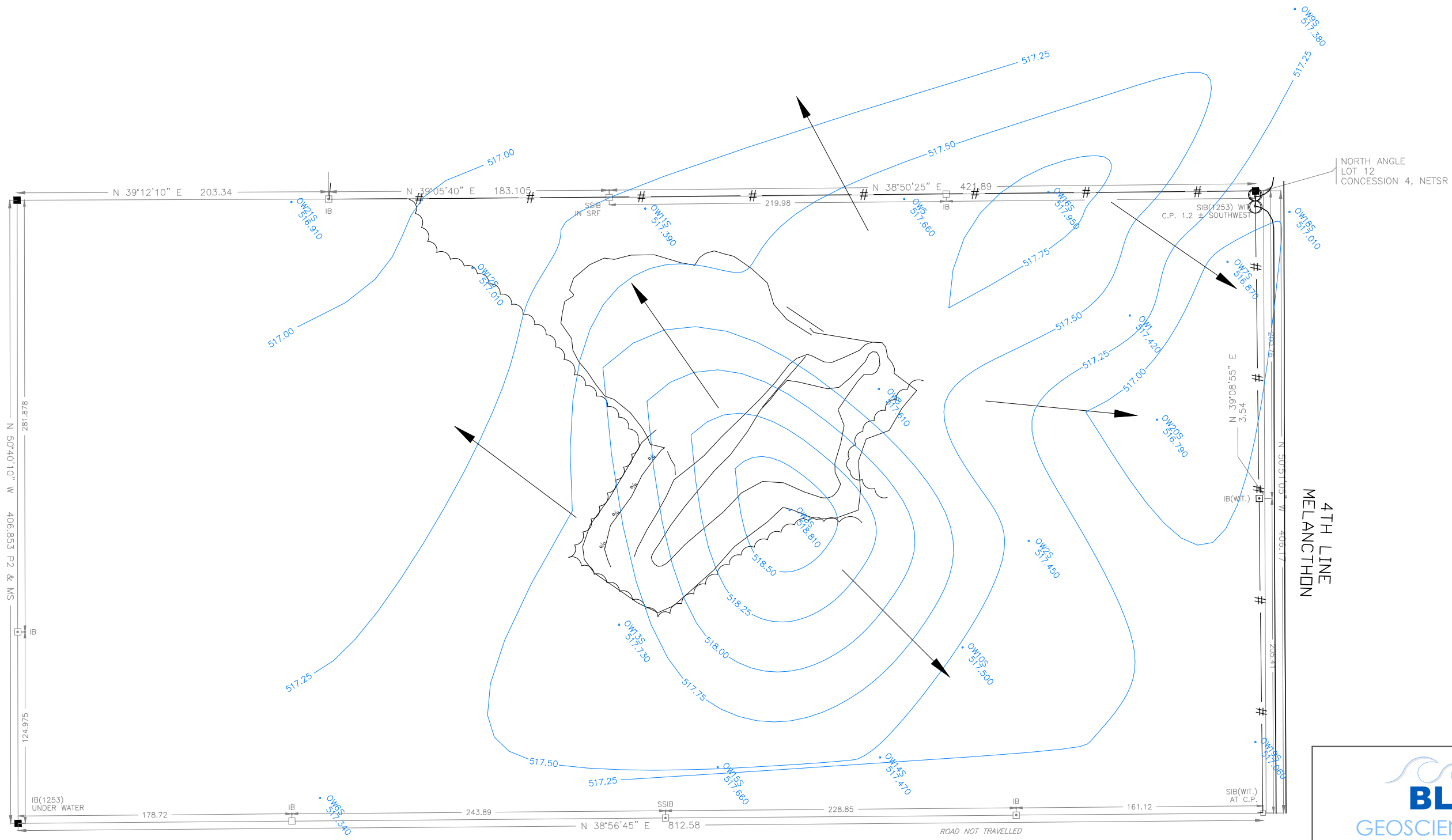
Bluewater Geoscience Consultants Inc. operates under a Certificate of Authorization from The Association of Professional Geoscientists of Ontario (APGO). Breton Lemieux is a registered Qualified Person (QP) with MECP and is a licensed Professional Geoscientist with over thirty-five years of international environmental consulting experience. Mr. Lemieux has a Geologic Technologist Diploma from Fleming College in Lindsay, Ontario, an Honours Bachelor of Science degree in Geology from the University of the West Indies in Kingston, Jamaica and a Master of Science degree in Earth Sciences from the University of Waterloo. His experience includes conducting Phase I, II and III ESAs at a wide variety of contaminated sites, underground storage tank removal supervision, water supply development, environmental building science and other site and landfill environmental monitoring projects.

APPENDIX A

FIGURES



			
TOWNSHIP OF MELANCTHON			
LANDFILL			
ACTIVE FILL AREA – FALL 2023			
DRAWN BY: J.Y.	APPROVED BY: -	PROJECT NO: BG-850	FIGURE NO. 1
DESIGNED BY: -	DATE: DEC. 2023	SCALE: N.T.S.	




● OW155 517.660 MONITOR WELL GROUNDWATER ELEVATION
— 517.25 GROUNDWATER CONTOUR (0.25m INTERVAL)
→ GW FLOW DIRECTION

NORTH ANGLE
LOT 12
CONCESSION 4, NETSR

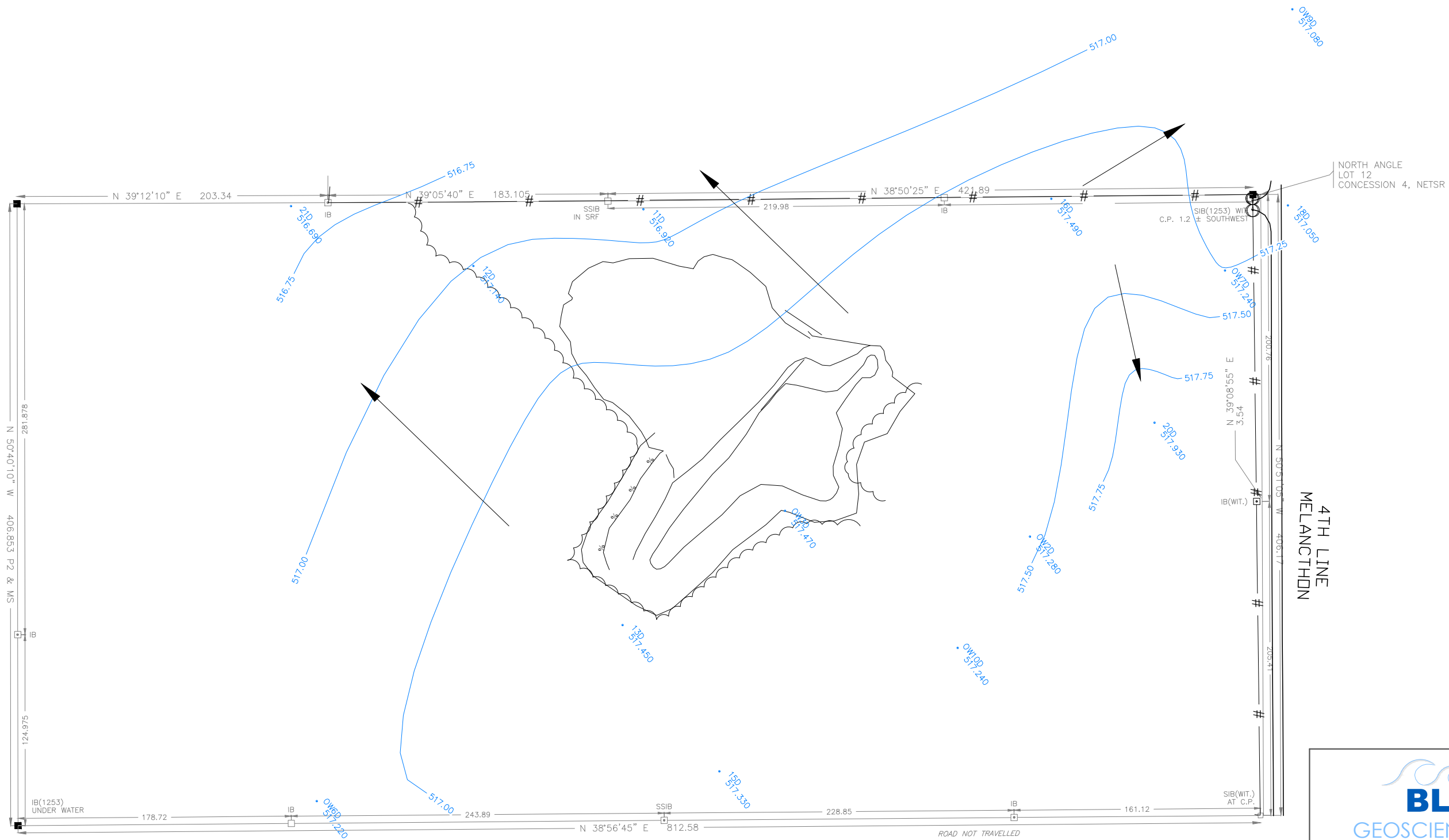
4TH LINE
MELANCTHON

ROAD NOT TRAVELLED



BLUEWATER
GEOSCIENCE CONSULTANTS Inc.


TOWNSHIP OF MELANCTHON LANDFILL			
SHALLOW AQUIFER GROUNDWATER FLOW			
SPRING 2023			
DRAWN BY: J.Y.	APPROVED BY: —	PROJECT NO: BG-850	FIGURE NO. 2
DESIGNED BY: —	DATE: DEC. 2023	SCALE: N.T.S.	

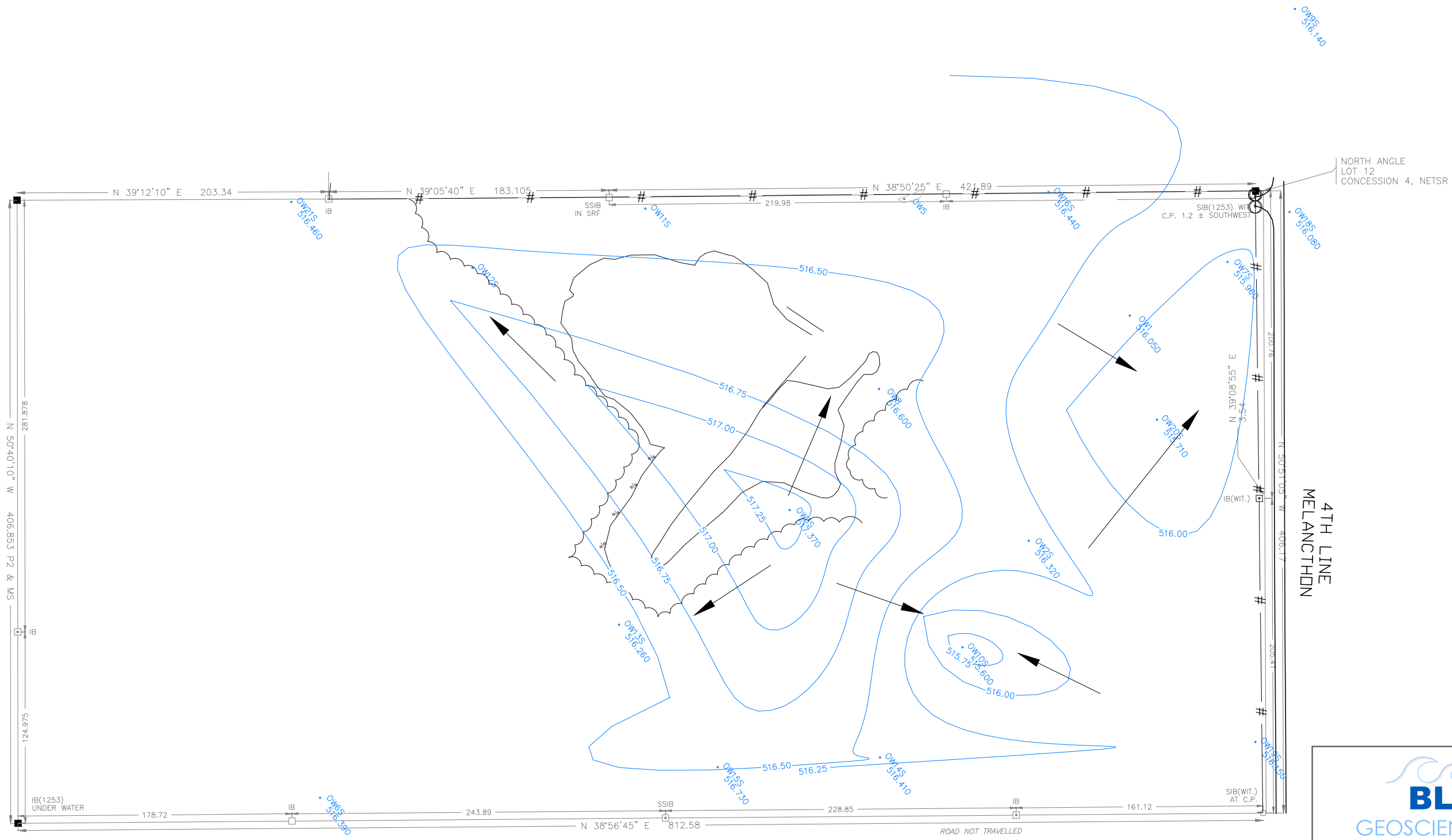


15D
 517.330 MONITOR WELL
 GROUNDWATER ELEVATION


 517.25 GROUNDWATER CONTOUR (0.25m INTERVAL)

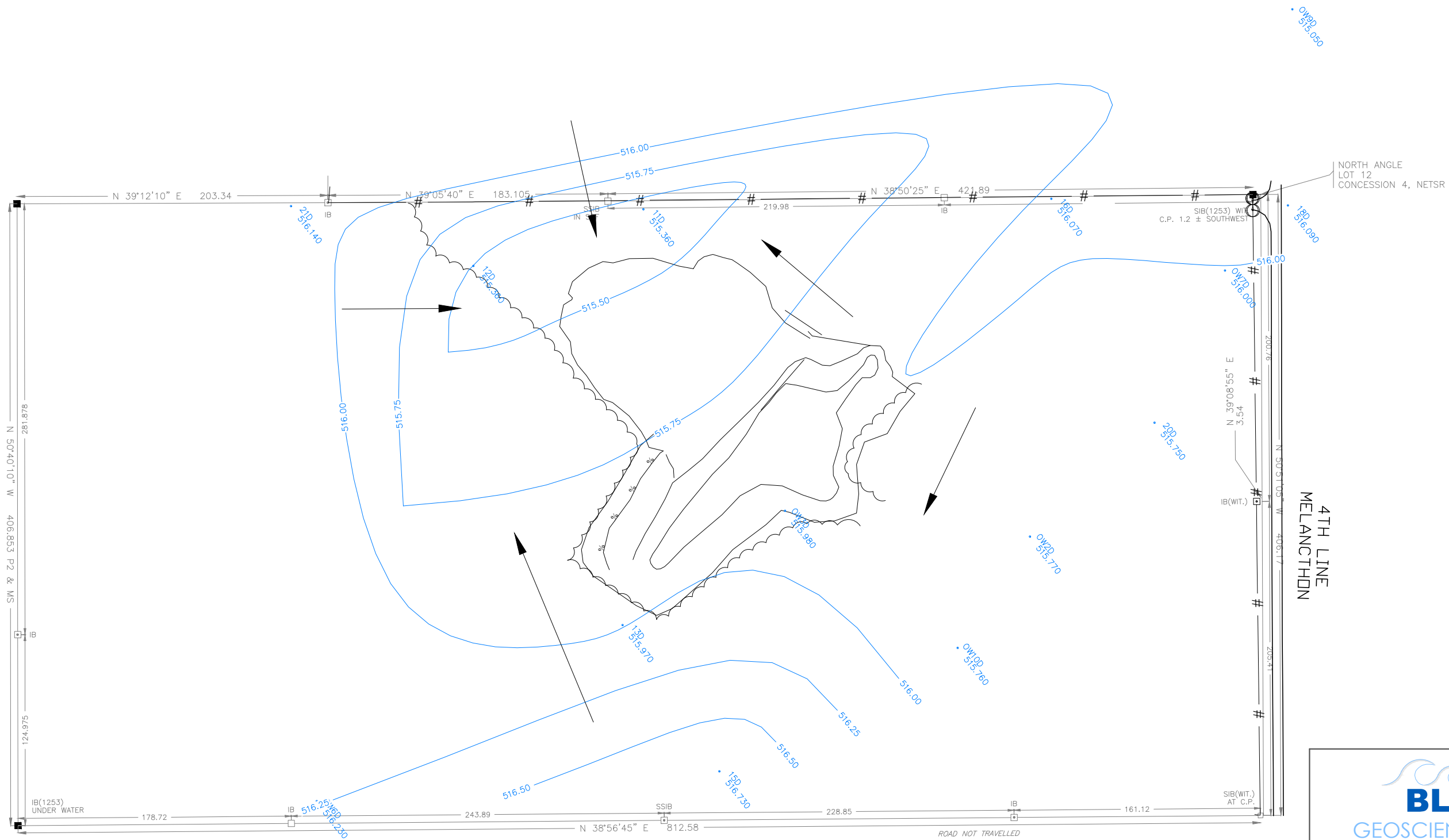
 ─────────▶ GW FLOW DIRECTION

 BLUEWATER GEOSCIENCE CONSULTANTS Inc.			
TOWNSHIP OF MELANCTHON LANDFILL			
DEEP AQUIFER GROUNDWATER FLOW			
SPRING 2023			
DRAWN BY: J.Y.	APPROVED BY: -	PROJECT NO: BG-850	FIGURE NO. 3
DESIGNED BY: -	DATE: DEC. 2023	SCALE: N.T.S.	




OW15S 515.800 MONITOR WELL GROUNDWATER ELEVATION
 516.50 GROUNDWATER CONTOUR (0.25m INTERVAL)
 → GW FLOW DIRECTION

			
TOWNSHIP OF MELANCTHON LANDFILL			
SHALLOW AQUIFER GROUNDWATER FLOW			
FALL 2023			
DRAWN BY: J.Y.	APPROVED BY: -	PROJECT NO: BG-850	4
DESIGNED BY: -	DATE: DEC.2023	SCALE: N.T.S.	



15D 516.730 MONITOR WELL GROUNDWATER ELEVATION
 515.2 GROUNDWATER CONTOUR (0.25m INTERVAL)
 → GW FLOW DIRECTION

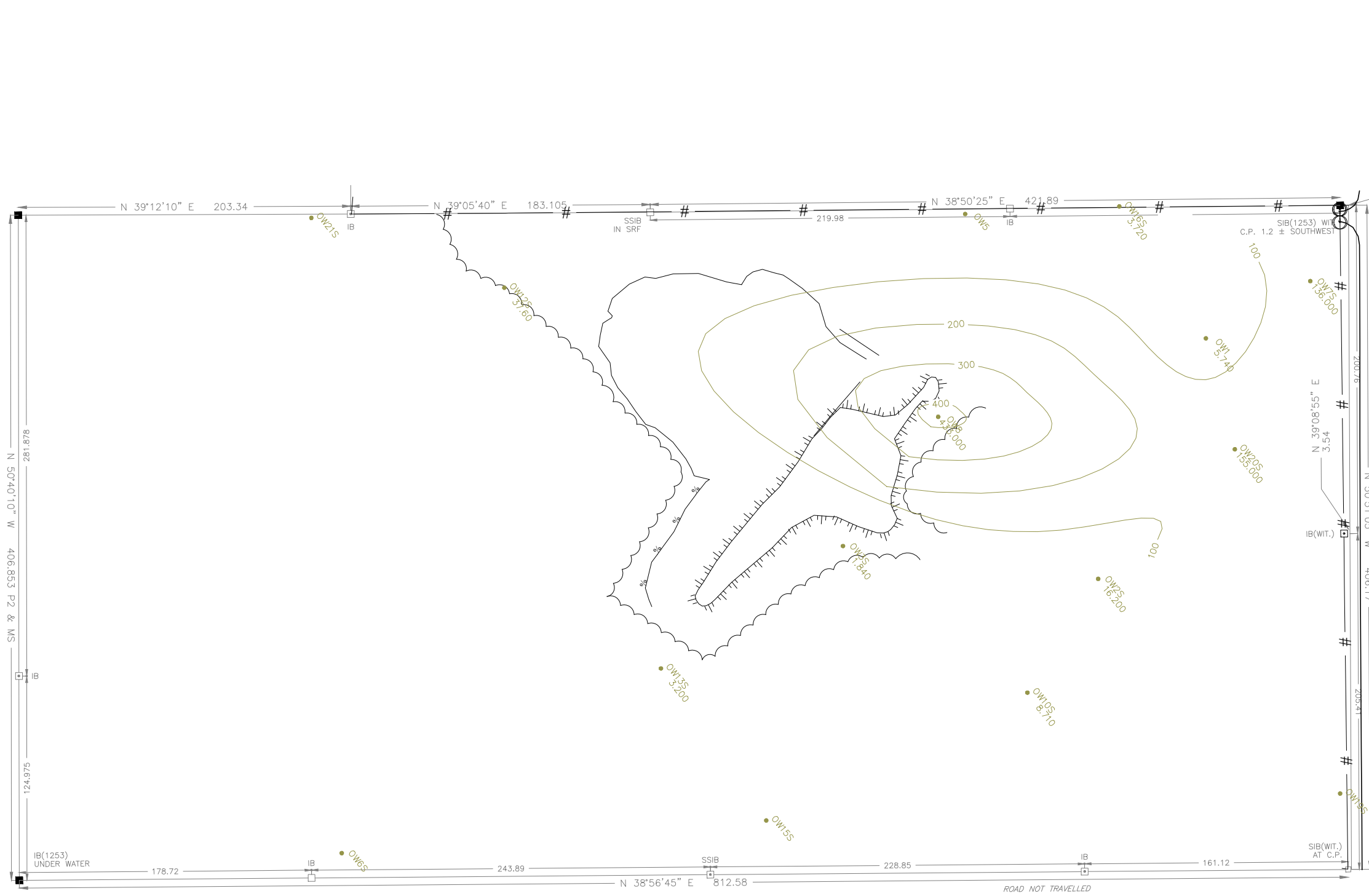

BLUEWATER
 GEOSCIENCE CONSULTANTS Inc.

TOWNSHIP OF MELANCTHON LANDFILL

DEEP AQUIFER GROUNDWATER FLOW


FALL 2023

DRAWN BY: J.Y.	APPROVED BY: -	PROJECT NO: BG-850	FIGURE NO. 5
DESIGNED BY: -	DATE: DEC. 2023	SCALE: N.T.S.	



NORTH ANGLE
LOT 12
CONCESSION 4, NETSR

4TH LINE
MELANCTHON



BLUEWATER
GEOSCIENCE CONSULTANTS Inc.

TOWNSHIP OF MELANCTHON LANDFILL

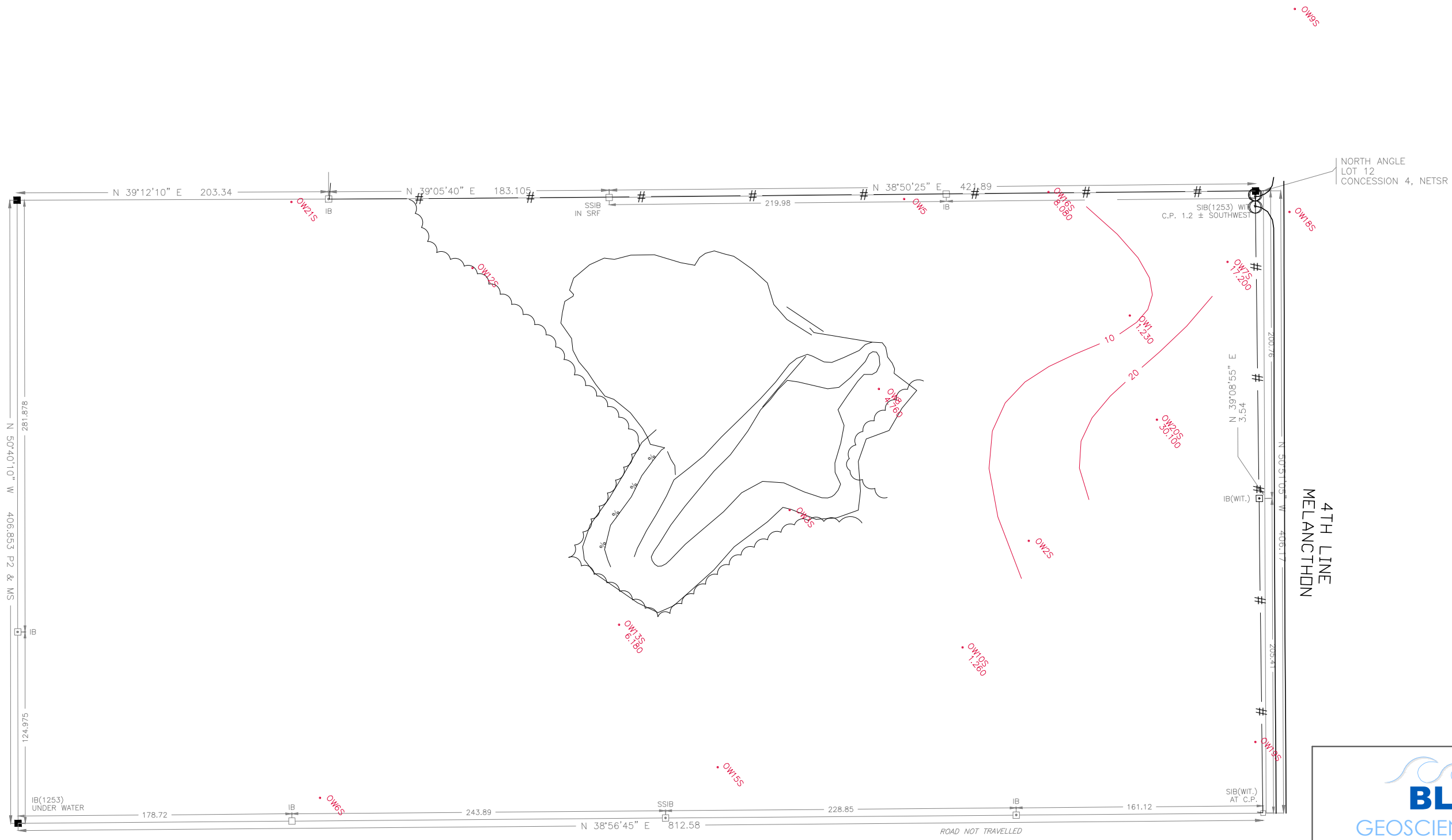
SULPHATE G.W. CONCENTRATION

SHALLOW AQUIFER – SPRING 2023

DRAWN BY: J.Y.	APPROVED BY: -	PROJECT NO: BG-850	FIGURE NO. 6
DESIGNED BY: -	DATE: DEC. 2023	SCALE: N.T.S.	

● OW16S 3.720 MONITOR WELL
SULPHATE GW CONCENTRATION (mg/l)


— 200.0 — SULPHATE GW CONTOUR (100mg/L INTERVAL)



• OW20S 30.100 MONITOR WELL CHLORIDE GW CONCENTRATION (mg/L)
— 10.0 CHLORIDE GW CONTOUR (10mg/L INTERVAL)

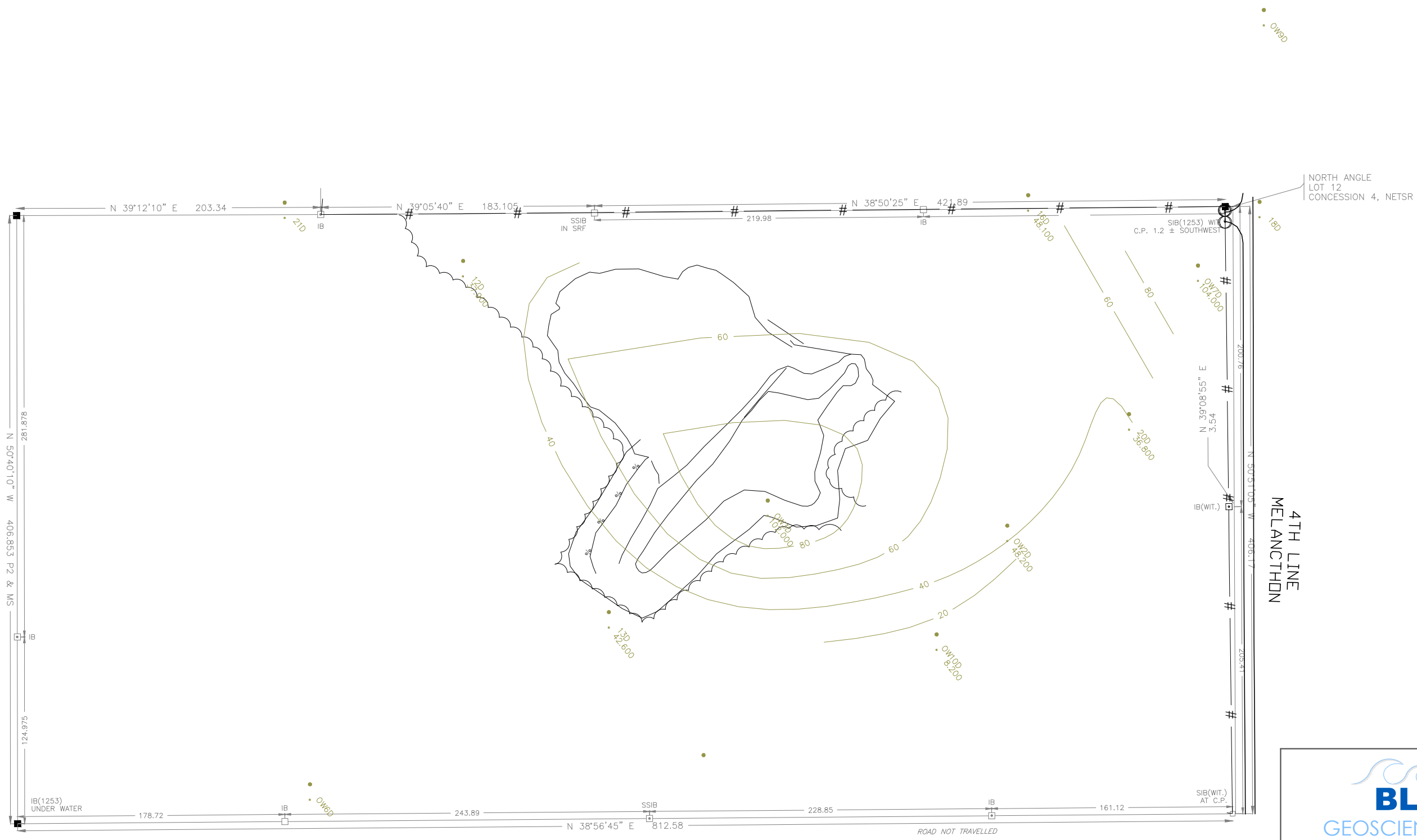
NORTH ANGLE
LOT 12
CONCESSION 4, NETSR

4TH LINE
MELANCTHON




BLUEWATER
GEOSCIENCE CONSULTANTS Inc.

TOWNSHIP OF MELANCTHON LANDFILL			
CHLORIDE G.W. CONCENTRATION			
SHALLOW AQUIFER – SPRING 2023			
DRAWN BY: J.Y.	APPROVED BY: -	PROJECT NO: BG-850	FIGURE NO. 7
DESIGNED BY: -	DATE: DEC. 2023	SCALE: N.T.S.	



● OW16D MONITOR WELL
 48.100 SULPHATE GW CONCENTRATION (mg/l)
 — 20.0 — SULPHATE GW CONTOUR (20mg/L INTERVAL)



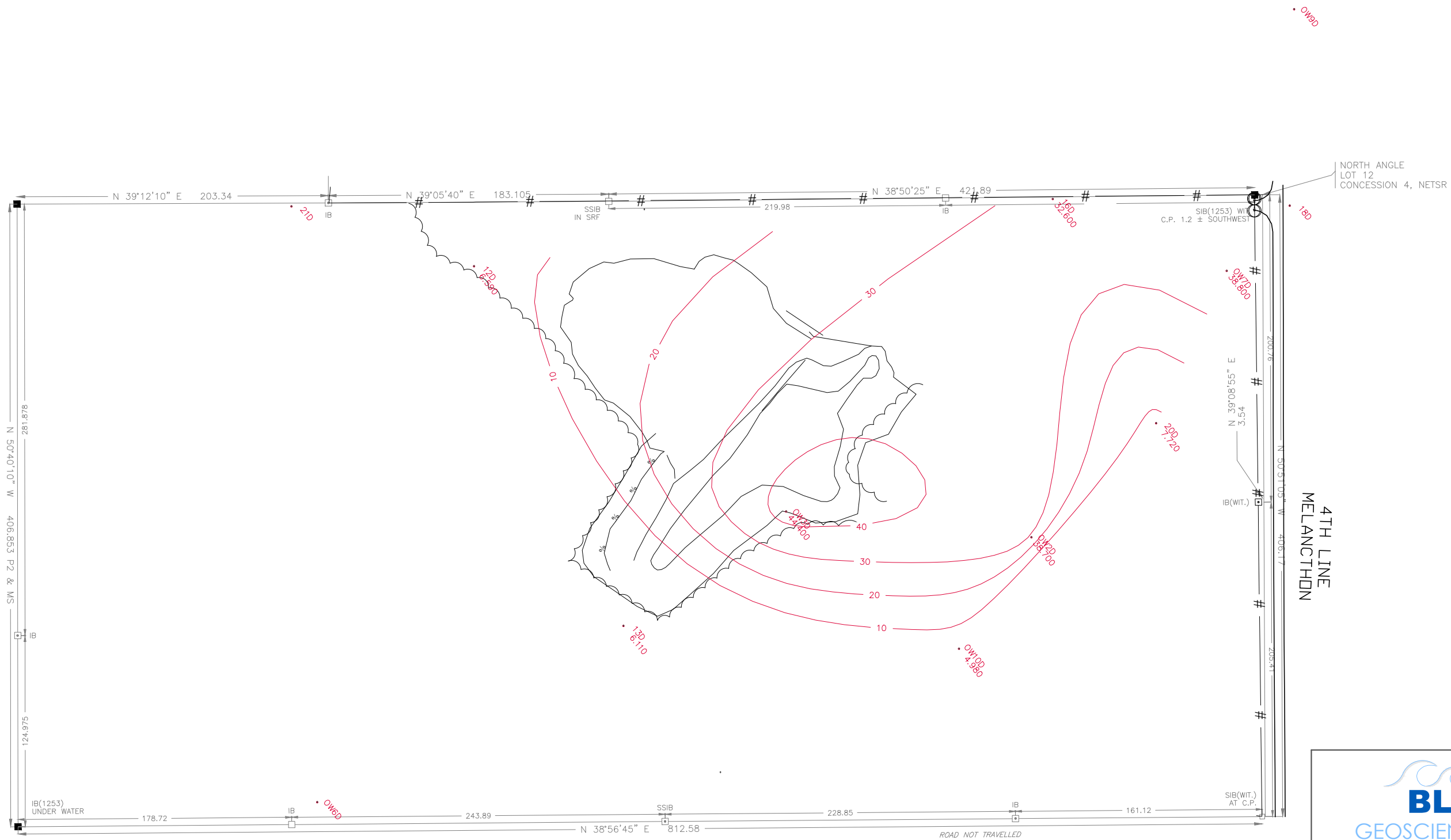
BLUEWATER
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TOWNSHIP OF MELANCTHON LANDFILL

SULPHATE G.W. CONCENTRATION


DEEP AQUIFER — SPRING 2023

DRAWN BY: J.Y.	APPROVED BY: —	PROJECT NO: BG-850	FIGURE NO. 8
DESIGNED BY: —	DATE: DEC. 2023	SCALE: N.T.S.	



OW16D
 32.600
 MONITOR WELL
 CHLORIDE GW CONCENTRATION (mg/L)

20.0
 CHLORIDE GW CONTOUR (10mg/L INTERVAL)



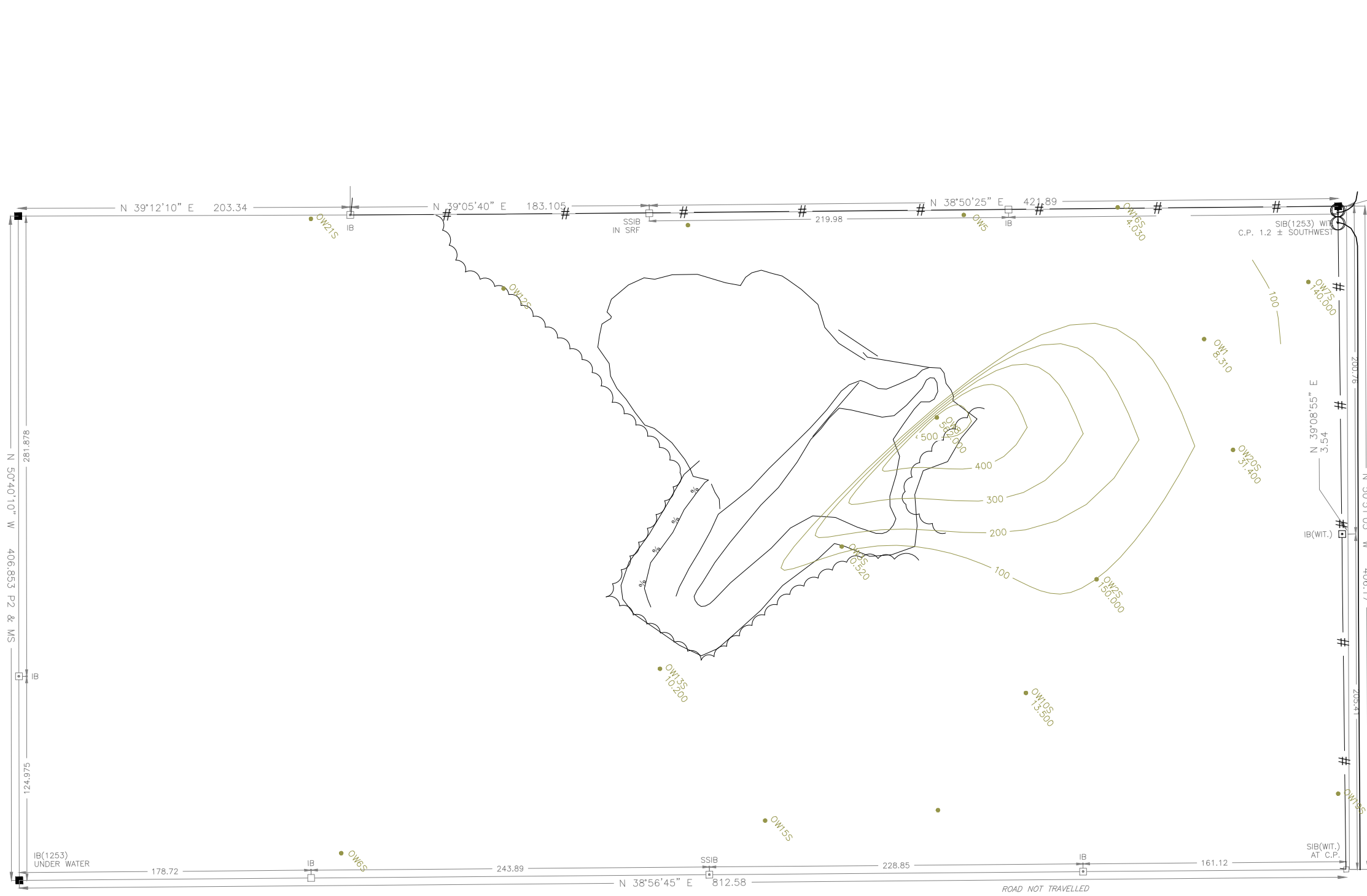
BLUEWATER
GEOSCIENCE CONSULTANTS Inc.

TOWNSHIP OF MELANCTHON LANDFILL

CHLORIDE G.W. CONCENTRATION

DEEP AQUIFER – SPRING 2023

DRAWN BY: J.Y.	APPROVED BY: -	PROJECT NO: BG-850	FIGURE NO. 9
DESIGNED BY: -	DATE: DEC. 2023	SCALE: N.T.S.	



NORTH ANGLE
LOT 12
CONCESSION 4, NETSR

4TH LINE
MELANCTHON



TOWNSHIP OF MELANCTHON LANDFILL

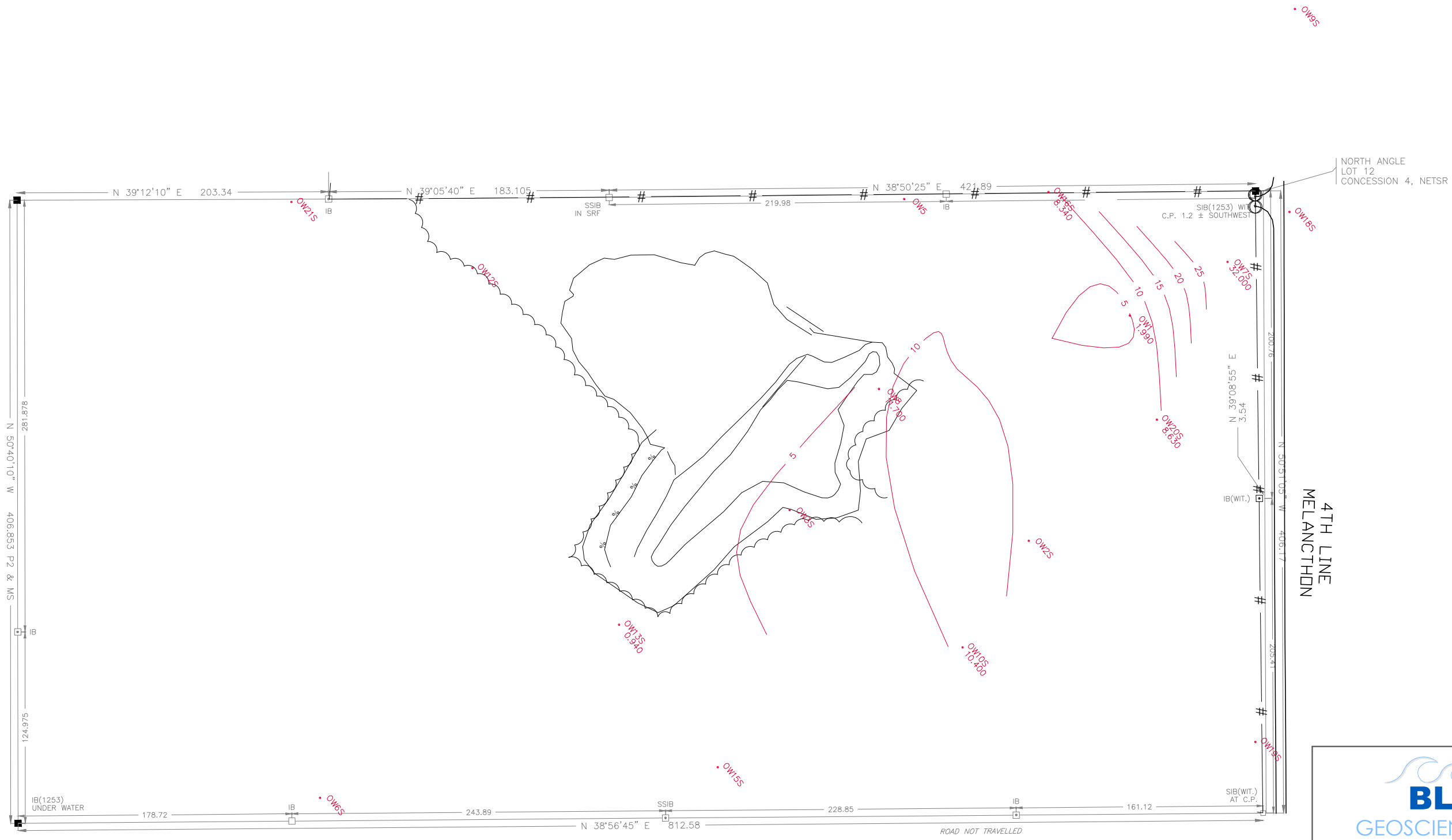
SULPHATE G.W. CONCENTRATION

SHALLOW AQUIFER – FALL 2023


DRAWN BY: J.Y.	APPROVED BY: -	PROJECT NO: BG-850	FIGURE NO. 10
DESIGNED BY: -	DATE: DEC. 2023	SCALE: N.T.S.	

● OW20S
31.400 MONITOR WELL
SULPHATE GW CONCENTRATION (mg/l)

100.0 ————
SULPHATE GW CONTOUR (100mg/L INTERVAL)

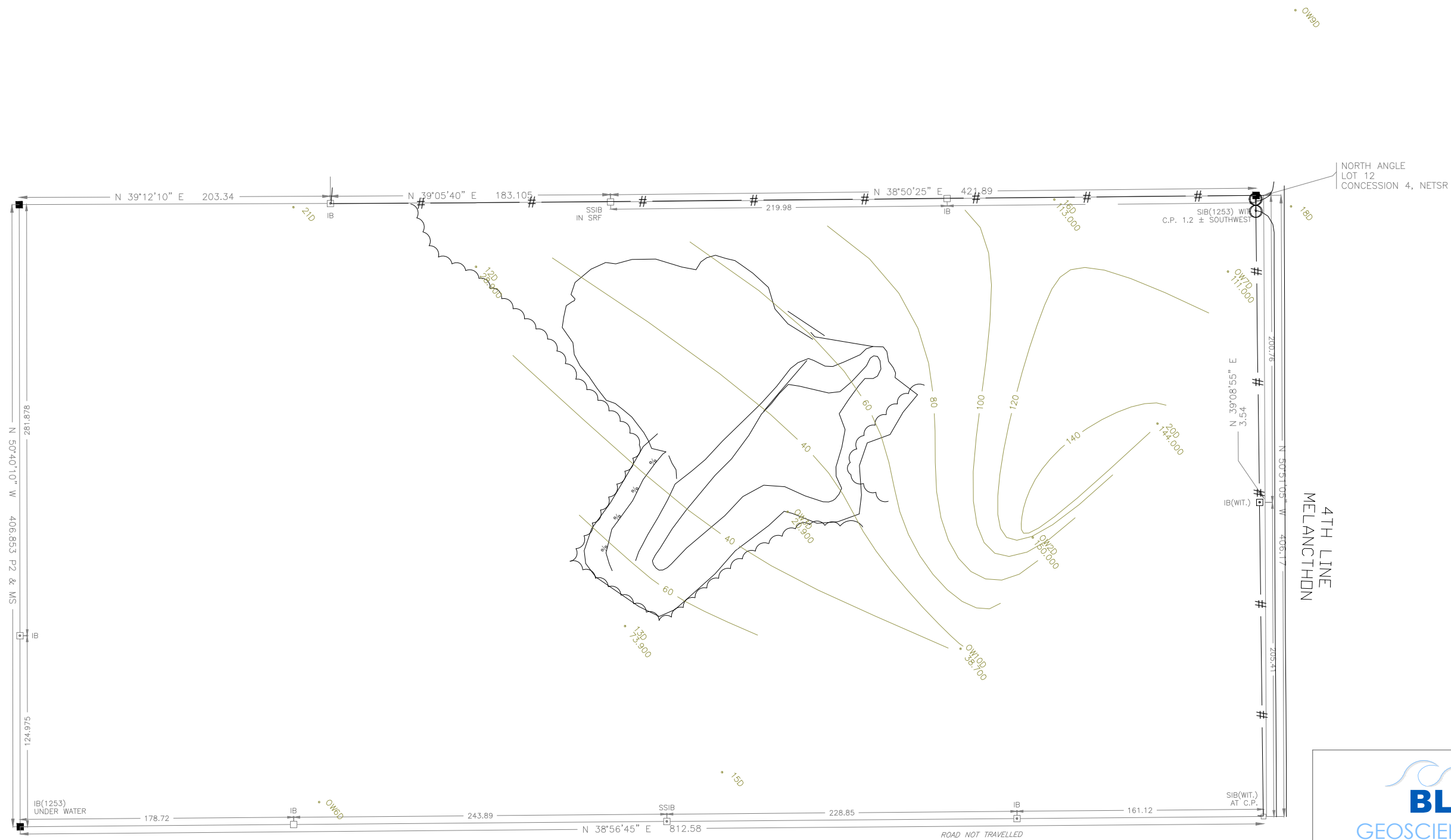


• OW15S 0.910 MONITOR WELL CHLORIDE GW CONCENTRATION (mg/L)
— 10.0 CHLORIDE GW CONTOUR (5mg/L INTERVAL)



BLUEWATER
GEOSCIENCE CONSULTANTS Inc.

TOWNSHIP OF MELANCTHON LANDFILL			
CHLORIDE G.W. CONCENTRATION			
SHALLOW AQUIFER – FALL 2023			
DRAWN BY: J.Y.	APPROVED BY: -	PROJECT NO: BG-850	FIGURE NO. 11
DESIGNED BY: -	DATE: DEC. 2023	SCALE: N.T.S.	

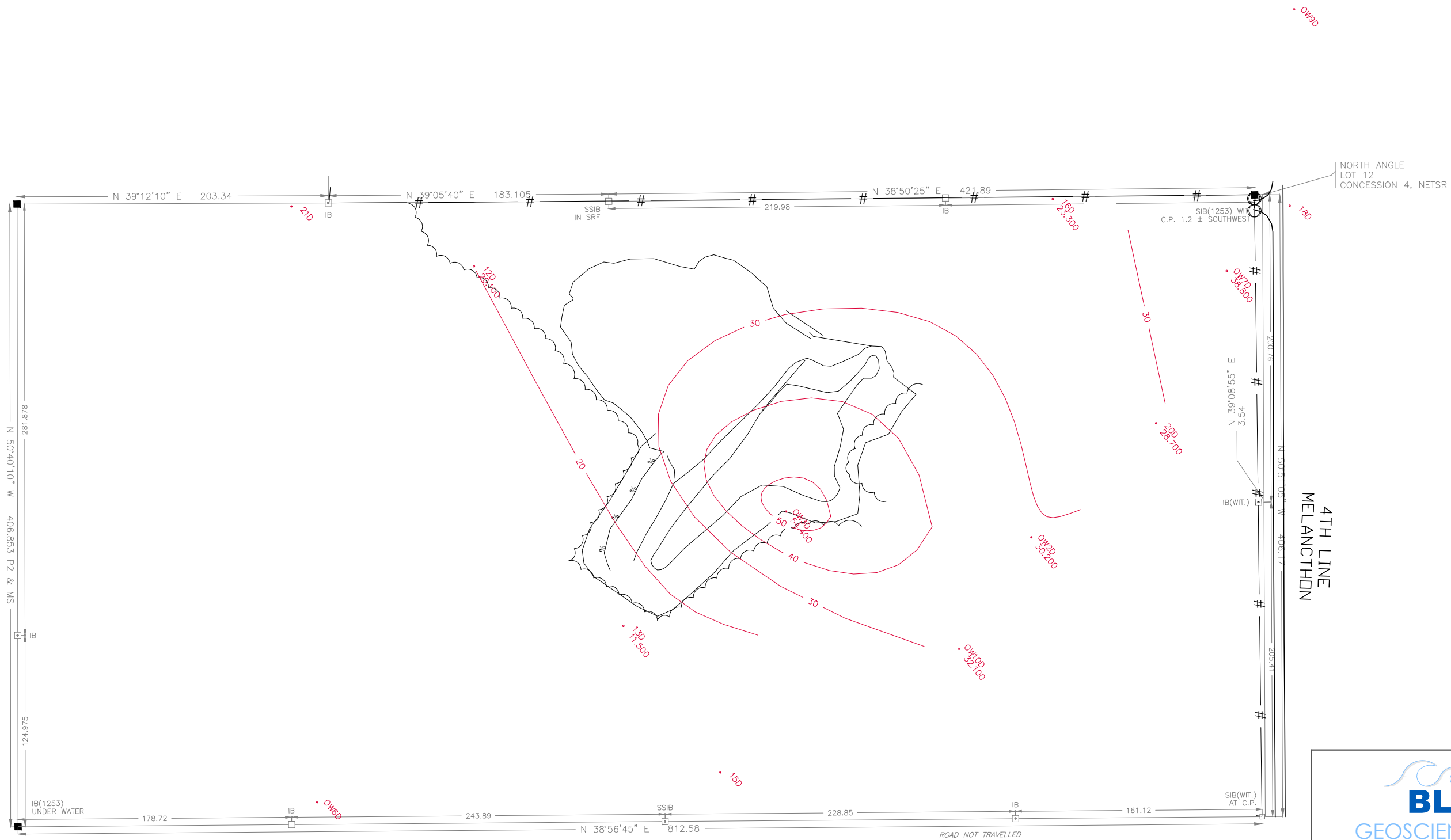


TOWNSHIP OF MELANCTHON LANDFILL


SULPHATE G.W. CONCENTRATION

DEEP AQUIFER – FALL 2023

DRAWN BY: J.Y.	APPROVED BY: -	PROJECT NO: BG-850	FIGURE NO. 12
DESIGNED BY: -	DATE: DEC. 2023	SCALE: N.T.S.	



OW15D MONITOR WELL
 13.500 CHLORIDE GW CONCENTRATION (mg/L)
 20.0 CHLORIDE GW CONTOUR (10mg/L INTERVAL)



BLUEWATER
GEOSCIENCE CONSULTANTS Inc.

TOWNSHIP OF MELANCTHON LANDFILL

CHLORIDE G.W. CONCENTRATION

DEEP AQUIFER – FALL 2023

DRAWN BY: J.Y.	APPROVED BY: -	PROJECT NO: BG-850	FIGURE NO. 13
DESIGNED BY: -	DATE: DEC. 2023	SCALE: N.T.S.	

APPENDIX B

GROUNDWATER AND METHANE MONITORING
AND
LABORATORY RESULTS TABLES

1,2-Dichloropropane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,3-Dichlorobenzene	N/V	630	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,4-Dichlorobenzene	5	1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
2-Chloroethylvinyl Ether	N/V	N/V	N/V	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	N/V	N/V	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Acetone	N/V	300	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Benzene	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromodichloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromoform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromomethane	N/V	10	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Carbon Disulfide	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Carbon tetrachloride	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chlorobenzene	N/V	30	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloroethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Chloroform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
cis-1,2-Dichloroethylene	N/V	70	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
cis-1,3-Dichloropropene	N/V	1.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dibromochloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dichlorodifluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Dichloromethane	50	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Ethyl Benzene	2.4	2.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
m+p-Xylenes	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Methyl Ethyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Methyl Isobutyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
MTBE	N/V	700	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
o-Xylene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Styrene	N/V	100	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Tetrachloroethylene	30	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Toluene	24	24	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,2-Dichloroethylene	N/V	0.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,3-Dichloropropene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichloroethylene	50	50	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichlorofluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Trihalomethanes (total)	100	N/V	N/V	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT
Vinyl chloride	2	1.3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Xylenes (Total)	300	300	N/V	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT

Notes:

OWDS - Ontario Drinking Water Standards (mg/L) from Ont. Reg. 169/03

SCS - Table 2 Site Condition Standards (mg/L) from Ont. Reg. 153/04

RUP - Reasonable Use Policy from Guideline B-7, MOEE, 1994

Values shown in **BOLD** exceed ODWS

N/V - No Value. No maximum concentration assigned.

NT - Not Tested, no analysis completed for this parameter/sample

Analyses completed at ALS Laboratory Group in Waterloo, ON

Benzene	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromodichloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromoform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromomethane	N/V	10	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Carbon Disulfide	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Carbon tetrachloride	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chlorobenzene	N/V	30	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloroethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Chloroform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
cis-1,2-Dichloroethylene	N/V	70	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
cis-1,3-Dichloropropene	N/V	1.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dibromochloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dichlorodifluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Dichloromethane	50	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Ethyl Benzene	2.4	2.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
m+p-Xylenes	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Methyl Ethyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Methyl Isobutyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
MTBE	N/V	700	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
o-Xylene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Styrene	N/V	100	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Tetrachloroethylene	30	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Toluene	24	24	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,2-Dichloroethylene	N/V	0.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,3-Dichloropropene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichloroethylene	50	50	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichlorofluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Trihalomethanes (total)	100	N/V	N/V	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT
Vinyl chloride	2	1.3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Xylenes (Total)	300	300	N/V	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT

Notes:

OWDS - Ontario Drinking Water Standards (mg/L) from Ont. Reg. 169/03

SCS - Table 2 Site Condition Standards (mg/L) from Ont. Reg. 153/04

RUP - Reasonable Use Policy from Guideline B-7, MOEE, 1994

Values shown in **BOLD** exceed ODWS

N/V - No Value. No maximum concentration assigned.

NT - Not Tested, no analysis completed for this parameter/sample

Analyses completed at ALS Laboratory Group in Waterloo, ON

Well ID				OW2D															
Data Sampled				3-May-16	29-Oct-16	25-Apr-17	2-Oct-17	30-Apr-18	25-Oct-18	22-May-19	23-Oct-19	28-Apr-20	14-Oct-20	18-May-21	13-Oct-21	4-May-22	25-Oct-22	3-May-23	18-Oct-23
Parameter	ODWS	SCS	RUP																
Color, Apparent (C.U.)	5	N/V	N/V	111	85.5	165	37.2	54.4	21	68.9	51.3	26.2	12.4	30.9	181	163	49.4	350	56.2
Conductivity (umhos/cm)	N/V	N/V	N/V	1290	1320	1320	1380	1470	1410	1440	1312	1470	1300	1550	1430	1330	1400	1380	1380
Hardness (as CaCO3 - mg/L)	80-100	N/V	N/V	597	661	609	621	620	651	677	693	581	757	625	658	676	653	571	699
pH (pH units)	6.5-8.5	N/V	8.2	7.41	7.58	7.23	6.91	7.21	7.34	7.81	7.13	6.9	7.76	6.95	7.01	7.39	6.94	7.81	7.49
Total Dissolved Solids (mg/L)	N/V	N/V	394	728	679	736	848	784	792	834	860	781	864	783	744	783	699	705	792
Turbidity (NTU)	1	N/V	N/V	33	38.6	67.3	24.9	61.7	76.9	78.4	40.1	73.1	25.8	74.4	27.1	81.3	83.0	78.4	27.4
Alkalinity, Total (mg/L)	30-500	N/V	391.5	629	546	580	545	646	622	643	481	705	611	724	702	695	691	723	640
Ammonia as N (mg/L)	N/V	N/V	N/V	7.6	3.45	8.89	3.52	10.8	9.36	10.3	4.78	12.9	4.96	13.2	13.5	16.0	13.0	14.4	6.6
Chloride (mg/L)	250	250	125.5	43.2	37.9	44.5	38.6	51.4	48.7	52.8	8.19	50.7	38.6	54.2	44.6	44.9	39.0	38.7	30.2
Fluoride (mg/L)	1.5	N/V	0.45	0.062	>0.1	0.048	>0.1	<0.02	<0.02	0.043	<0.02	<0.1	<0.1	<0.1	<0.02	<0.10	<0.10	<0.10	<0.10
Nitrite-N (mg/L)	1	1	0.3	<0.01	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1	0.02	<0.10	<0.10	<0.10	<0.10
Nitrate-N (mg/L)	10	10	2.6	<0.02	<0.1	<0.02	<0.1	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.01	<0.050	<0.050	<0.050	<0.050
Phosphate-P (ortho)	N/V	N/V	N/V	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.0030	<0.0030	<0.0030	<0.0030
Sulphate (mg/L)	500	N/V	253.9	88.6	179	85.7	219	90.3	85.6	83.9	45.1	80.7	203	57.7	49.9	45.4	42.9	48.2	150.0
Metal Scan-Total	Units: mg/L			mg/L															
Aluminum (Al)-Total	N/V	N/V	0.0525	<0.010	<0.010	0.0092	<0.010	<0.01	0.024	<0.010	<0.010	<0.0050	<0.0050	0.0097	<0.0050	<0.0050	<0.0050	0.0174	0.0040
Antimony (Sb)-Total	N/V	0.006	N/V	<0.0050	<0.0050	0.168	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.025	0.025	N/V	0.0071	0.0026	<0.0010	0.0029	0.0034	0.0032	0.0083	<0.0010	0.00681	0.00272	0.00347	0.00832	0.0105	0.00797	0.00934	0.00270
Barium (Ba)-Total	1	1	N/V	0.185	0.110	<0.0010	0.178	0.147	0.144	0.211	0.172	0.170	0.147	0.173	0.205	0.250	0.207	0.189	0.136
Beryllium (Be)-Total	N/V	0.004	N/V	<0.0010	<0.0010	0.402	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.000020	<0.000020
Bismuth (Bi)-Total	N/V	N/V	N/V	<0.0010	<0.0010	<0.000090	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total	5	5	2.5025	0.390	0.548	138	0.411	0.473	0.429	0.569	0.618	0.439	0.547	0.475	0.615	0.595	0.631	0.455	0.612
Cadmium (Cd)-Total	0.005	0.005	N/V	<0.000090	<0.000090	0.00059	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000050	0.0000185	<0.000050	<0.000050	<0.000050	<0.000050	0.000066	<0.000050
Calcium (Ca)-Total	N/V	N/V	N/V	134	134	0.00601	142	136	147	149	147	134	156	137	144	148	144	124	137
Chromium (Cr)-Total	0.05	0.05	N/V	<0.00050	0.00063	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	N/V	0.1	N/V	0.00705	0.00265	4.69	0.00079	0.00258	0.00078	0.00782	0.00066	0.00600	0.00354	0.00248	0.00634	0.00787	0.00664	0.00617	0.00391
Copper (Cu)-Total	1	0.023	0.5007	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00020	0.00071	<0.00020	<0.00020	0.00207	0.00336	0.00072	0.00080
Iron (Fe)-Total	0.3	N/V	0.17	4.55	1.98	63.8	<0.050	2.45	1.29	6.06	1.2	4.68	1.41	2.27	6.19	7.09	6.98	5.80	2.70
Lead (Pb)-Total	0.01	0.01	0.0027	<0.0010	<0.0010	0.978	<0.0010	<0.0010	0.0013	<0.0010	<0.0010	0.000332	0.00243	0.000245	0.000204	0.000365	0.000316	0.000460	0.00110
Magnesium (Mg)-Total	N/V	N/V	87	63.8	78.9	<0.0010	64.7	68.2	69.0	74	78.8	59.6	89.3	68.7	72.3	74.1	71.1	63.5	86.7
Manganese (Mn)-Total	0.05	N/V	0.09	0.972	0.658	0.0152	0.961	0.862	0.667	0.912	0.78	0.742	0.923	0.759	0.801	0.812	0.748	0.664	0.800
Molybdenum (Mo)-Total	N/V	7.3	N/V	<0.0010	<0.0010	<0.050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.000607	0.000785	0.000311	0.000727	0.000758	0.000776	0.000704	0.000690
Nickel (Ni)-Total	N/V	0.1	N/V	0.0174	0.0079	9.4	0.0051	0.0085	0.0051	0.0199	0.0047	0.0159	0.0113	0.00872	0.0175	0.0219	0.0182	0.0172	0.0111
Phosphorus (P)-Total	N/V	N/V	N/V	<0.050	<0.050	0.00123	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total	N/V	N/V	N/V	9.7	10.1	6.3	9.2	9.9	7.7	12.2	11.7	9.85	14.9	11.6	12.2	14.3	13.2	11.7	13.7
Selenium (Se)-Total	0.01	0.01	N/V	<0.00040	<0.00040	<0.00010	0.00136	0.00179	0.00716	<0.00040	0.00078	0.000121	0.000144	0.00304	0.000422	0.000125	0.000285	0.000393	0.000142
Silicon (Si)-Total	N/V	N/V	N/V	6.8	6.4	32.1	6.4	6.8	7.8	7.7	7.2	6.04	6.66	6.83	7.41	8.40	7.85	6.94	7.68
Silver (Ag)-Total	N/V	0.0012	N/V	<0.00010	<0.00010	0.293	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000010	<0.00010
Sodium (Na)-Total	N/V	N/V	100.5	36.4	26.4	<0.00030	33.5	31.8	30.3	46.4	35.6	36.0	34.1	37.5	41.1	46.6	40.9	36.1	30.7
Strontium (Sr)-Total	N/V	N/V	N/V	0.286	0.277	<0.0010	0.300	0.292	0.292	0.35	0.335	0.304	0.371	0.326	0.344	0.407	0.382	0.334	0.349
Thallium (Tl)-Total	N/V	0.002	N/V	0.00035	<0.00030	<0.0020	<0.00030	<0.00030	0.00084	0.00042	<0.00030	0.000258	0.00103	0.000137	0.000159	0.000343	0.000184	0.000182	0.000229
Tin (Sn)-Total	N/V	N/V	N/V	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00010	0.00022	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	N/V	N/V	N/V	<0.0020	<0.0020	<0.0050	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.00030	<0.00030	<0.00060	0.00032	<0.00030	<0.00030	<0.00060	<0.00030
Tungsten (W)-Total	N/V	N/V	N/V	<0.010	<0.010	<0.0010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	N/V	N/V	N/V	<0.0050	<0.0050	0.0442	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.000832	0.00156	0.00104	0.000930	0.00102	0.000979	0.000970	0.00141
Vanadium (V)-Total	N/V	0.2	N/V	<0.0010	<0.0010	<0.0040	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	5	1.1	0.005	0.0640	0.0121	0.0640	<0.0030	0.0147	0.143	0.0507	0.0057	0.0371	0.112	0.0199	0.0044	0.0362	0.0070	0.0127	0.0071
Zirconium (Zr)-Total	N/V	N/V	N/V	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.00072	0.00038	0.00058	0.00095	0.00099	0.00111	0.00080	0.00051
Volatile Organics	Units: µg/L			µg/L															
1,1,1,2-Tetrachloroethane	N/V	200	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,1,2,2-Tetrachloroethane	N/V	1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,1,1-Trichloroethane	N/V	200	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,1,2-Trichloroethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,2-Dibromoethane	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,1-Dichloroethane	N/V	70	N/V	0.78	NT	0.83	NT	0.72	NT	0.72	NT	0.6	NT	0.6	NT	0.6	NT	0.6	NT
1,1-Dichloroethylene	14	4.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,2-Dichlorobenzene	200	3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,2-Dichloroethane	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,2-Dichloropropane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,3-Dichlorobenzene	N/V	630	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,4-Dichlorobenzene	5	1	N/V																

2-Chloroethylvinyl Ether	N/V	N/V	N/V	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	N/V	N/V	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Acetone	N/V	300	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Benzene	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromodichloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromoform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromomethane	N/V	10	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Carbon Disulfide	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Carbon tetrachloride	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chlorobenzene	N/V	30	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloroethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Chloroform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
cis-1,2-Dichloroethylene	N/V	70	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
cis-1,3-Dichloropropene	N/V	1.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dibromochloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dichlorodifluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Dichloromethane	50	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Ethyl Benzene	2.4	2.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
m+p-Xylenes	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Methyl Ethyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Methyl Isobutyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
MTBE	N/V	700	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
o-Xylene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Styrene	N/V	100	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Tetrachloroethylene	30	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Toluene	24	24	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,2-Dichloroethylene	N/V	0.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,3-Dichloropropene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichloroethylene	50	50	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichlorofluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Trihalomethanes (total)	100	N/V	N/V	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT
Vinyl chloride	2	1.3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Xylenes (Total)	300	300	N/V	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT

Notes:

OWDS - Ontario Drinking Water Standards (mg/L) from Ont. Reg. 169/03

SCS - Table 2 Site Condition Standards (mg/L) from Ont. Reg. 153/04

RUP - Reasonable Use Policy from Guideline B-7, MOEE, 1994

Values shown in **BOLD** exceed ODWS

N/V - No Value. No maximum concentration assigned.

NT - Not Tested, no analysis completed for this parameter/sample

Analyses completed at ALS Laboratory Group in Waterloo, ON

Well ID				OW3D															
Data Sampled				3-May-16	10/192016	25-Apr-17	25-Oct-17	30-Apr-18	25-Oct-18	22-May-19	23-Oct-19	28-Apr-20	14-Oct-20	18-May-21	13-Oct-21	4-May-22	25-Oct-22	3-May-23	18-Oct-23
Parameter	ODWS	SCS	RUP																
Color, Apparent (C.U.)	5	N/V	N/V	488	118	89.9	52.4	157	130	29.6	67.8	49.7	104	230	47.7	185	41.9	1000	566.0
Conductivity (umhos/cm)	N/V	N/V	N/V	1840	1850	2070	2030	1740	1906	1990	1860	1990	1930	1710	1780	1630	1630	1830	634
Hardness (as CaCO3 - mg/L)	80-100	N/V	N/V	685	731	770	703	690	828	832	828	672	852	833	728	NT	NT	625	379
pH (pH units)	6.5-8.5	N/V	8.2	7.11	6.56	7.08	7.19	7.63	6.74	6.82	7.36	6.78	6.78	7.09	6.84	7.56	7.28	7.47	7.66
Total Dissolved Solids (mg/L)	N/V	N/V	394	1010	994	1090	1110	985	1080	1030	1100	1020	1020	994	887	768	888	940	318
Turbidity (NTU)	1	N/V	N/V	225	178	180	188	151	238	232	201	180	74.5	181	189	168	193	224	224
Alkalinity, Total (mg/L)	30-500	N/V	391.5	797	948	925	391.5	788	941	820	1020	965	997	893	953	920	820	917	401
Ammonia as N (mg/L)	N/V	N/V	N/V	33.5	33.7	42.2	38.7	30.7	34.5	37.5	41.2	41.1	37.5	37.3	34.5	31.6	34.1	37.5	0.0
Chloride (mg/L)	250	250	125.5	65.5	83.3	77.8	92.7	68.4	17.5	73.3	77.5	65.7	63.8	49.0	44.8	44.3	46.1	44.4	<0.5
Fluoride (mg/L)	1.5	N/V	0.45	<0.01	<0.1	<0.02	<0.1	0.057	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.03
Nitrite-N (mg/L)	1	1	0.3	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate-N (mg/L)	10	10	2.6	<0.1	<0.1	<0.02	<0.1	0.923	<0.02	<0.05	<0.05	<0.05	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phosphate-P (ortho)	N/V	N/V	N/V	<0.003	<0.003	<0.003	<0.003	0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Sulphate (mg/L)	500	N/V	253.9	140	48.4	121	46.3	60.5	9.7	94.9	36.7	38.1	31.8	36.0	37.7	28.5	30.4	102.0	0.5
Metal Scan-Total	Units: mg/L			mg/L															
Aluminum (Al)-Total	N/V	N/V	0.0525	0.010	0.011	0.011	0.011	0.013	<0.010	0.013	<0.050	<0.050	0.536	0.0167	<0.050	<0.050	0.0151	0.0263	0.0155
Antimony (Sb)-Total	N/V	0.006	N/V	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.00014	<0.00010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.025	0.025	N/V	0.0031	0.0052	0.0071	0.0059	0.0097	0.0022	0.0062	0.0053	0.0064	0.00798	0.00520	0.0050	0.0043	0.00580	0.00643	0.00551
Barium (Ba)-Total	1	1	N/V	0.379	0.265	0.401	0.414	0.605	0.396	0.419	0.601	0.648	0.455	0.413	0.583	0.533	0.394	0.413	0.433
Beryllium (Be)-Total	N/V	0.004	N/V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00010	<0.00010	<0.0010	<0.0010	<0.00010	<0.00020	<0.00020
Bismuth (Bi)-Total	N/V	N/V	N/V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	5	5	2.5025	0.646	0.514	0.724	0.807	0.986	0.721	0.758	1.12	1.13	0.796	0.786	1.15	1.00	0.844	0.693	0.832
Cadmium (Cd)-Total	0.005	0.005	N/V	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090	<0.000050	0.0000665	0.0000667	<0.000050	<0.000050	<0.000050	0.000070	<0.000050
Calcium (Ca)-Total	N/V	N/V	N/V	163	155	168	187	172	173	176	205	198	207	170	214	207	189	149	188
Chromium (Cr)-Total	0.05	0.05	N/V	0.00086	0.00121	0.00083	0.00078	0.00083	0.00053	0.00121	<0.0050	<0.0050	0.00184	0.00099	<0.0050	<0.0050	0.00114	0.00079	0.00098
Cobalt (Co)-Total	N/V	0.1	N/V	0.00094	0.00056	0.00061	0.00071	0.00084	0.00065	0.00083	<0.0010	<0.0010	0.00088	0.00071	<0.0010	<0.0010	0.00069	0.00066	0.00079
Copper (Cu)-Total	1	0.023	0.5007	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.005	<0.0020	0.00205	0.00029	0.0039	<0.0020	<0.0020	0.00083	0.00070
Iron (Fe)-Total	0.3	N/V	0.17	12.9	13.1	14.2	13.9	17.9	8.77	12.7	18.7	19.8	14.5	12.8	18.3	16.3	14.1	15.0	17.0
Lead (Pb)-Total	0.01	0.01	0.0027	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	0.0331	0.000209	<0.00050	<0.00050	0.000202	0.000361	0.000123
Magnesium (Mg)-Total	N/V	N/V	87	58.9	48.4	64.7	64.2	82.7	65.5	60.8	76.7	81.7	75.8	60.4	77.0	77.1	62.4	61.4	62.6
Manganese (Mn)-Total	0.05	0.05	0.09	0.770	0.768	0.924	0.912	0.857	0.674	0.595	0.785	0.787	0.675	0.587	0.707	0.654	0.544	0.578	0.648
Molybdenum (Mo)-Total	N/V	7.3	N/V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	0.000165	0.000163	<0.00050	<0.00050	0.000155	0.000212	0.000159
Nickel (Ni)-Total	N/V	0.1	N/V	0.0043	0.0035	0.0033	0.0045	0.0047	0.0034	0.0044	0.0062	<0.0050	0.00436	0.00351	0.0051	<0.0050	0.00322	0.00288	0.00350
Phosphorus (P)-Total	N/V	N/V	N/V	<0.050	<0.050	<0.050	<0.050	0.056	<0.050	<0.050	<0.050	<0.50	<0.50	0.097	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Total	N/V	N/V	N/V	22.7	16.7	23.7	22.7	34.0	25.1	22.8	32	34.4	23.6	24.9	30.3	31.6	25.4	25.2	26.7
Selenium (Se)-Total	0.01	0.01	N/V	<0.00040	0.00074	0.00071	<0.00040	0.00064	0.00087	0.00083	<0.00050	<0.00050	0.000398	0.00145	0.00118	<0.00050	0.00159	0.00428	0.000697
Silicon (Si)-Total	N/V	N/V	N/V	6.4	5.7	5.4	6.5	7.3	5.7	6.6	7.8	7.13	7.70	6.85	8.10	8.45	7.48	6.07	7.93
Silver (Ag)-Total	N/V	0.0012	N/V	<0.00010	<0.00010	<0.00010	0.00017	<0.00010	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010
Sodium (Na)-Total	N/V	N/V	100.5	52.5	41.0	49.1	55.2	73.6	53.0	56.7	79.7	73.5	54.0	54.2	69.8	65.2	46.7	40.9	52.5
Strontium (Sr)-Total	N/V	N/V	N/V	0.511	0.459	0.520	0.595	0.627	0.532	0.521	0.698	0.685	0.622	0.582	0.798	0.746	0.670	0.556	0.670
Thallium (Tl)-Total	N/V	0.002	N/V	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00010	<0.000060	0.000015	<0.00010	<0.00010	0.000013	0.000012	<0.000010
Tin (Sn)-Total	N/V	N/V	N/V	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00026	<0.00010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	N/V	N/V	N/V	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0030	<0.0030	<0.020	0.00057	<0.0030	<0.0030	0.00060	<0.00090	0.00068
Tungsten (W)-Total	N/V	N/V	N/V	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.00010	<0.00010	<0.0010	<0.0010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	N/V	N/V	N/V	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.00031	0.000426	0.000265	0.00033	0.00035	0.000354	0.000338	0.000250
Vanadium (V)-Total	N/V	0.2	N/V	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	0.0011	<0.0050	<0.0050	0.00252	0.00108	<0.0050	<0.0050	0.00114	0.00086	0.00113
Zinc (Zn)-Total	5	1.1	0.005	0.0050	<0.0030	0.0040	0.0037	<0.0030	<0.0030	<0.0030	<0.010	<0.010	0.0662	0.0034	<0.010	<0.010	0.0018	0.0042	0.0030
Zirconium (Zr)-Total	N/V	N/V	N/V	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0030	0.00297	0.00195	0.0025	0.0022	0.00227	0.00190	0.00228
Volatile Organics	Units: µg/L			µg/L															
1,1,1,2-Tetrachloroethane	N/V	200	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,1,2,2-Tetrachloroethane	N/V	1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,1,1-Trichloroethane	N/V	200	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,1,2-Trichloroethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
1,2-Dibromoethane	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT								

2-Chloroethylvinyl Ether	N/V	N/V	N/V	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	N/V	N/V	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Acetone	N/V	300	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Benzene	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromodichloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromoform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromomethane	N/V	10	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Carbon Disulfide	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Carbon tetrachloride	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chlorobenzene	N/V	30	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloroethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Chloroform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
cis-1,2-Dichloroethylene	N/V	70	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
cis-1,3-Dichloropropene	N/V	1.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dibromochloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dichlorodifluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Dichloromethane	50	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Ethyl Benzene	2.4	2.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
m+p-Xylenes	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Methyl Ethyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Methyl Isobutyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
MTBE	N/V	700	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
o-Xylene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Styrene	N/V	100	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Tetrachloroethylene	30	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Toluene	24	24	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,2-Dichloroethylene	N/V	0.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,3-Dichloropropene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichloroethylene	50	50	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichlorofluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Trihalomethanes (total)	100	N/V	N/V	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT
Vinyl chloride	2	1.3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Xylenes (Total)	300	300	N/V	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT

Notes:

OWDS - Ontario Drinking Water Standards (mg/L) from Ont. Reg. 169/03

SCS - Table 2 Site Condition Standards (mg/L) from Ont. Reg. 153/04

RUP - Reasonable Use Policy from Guideline B-7, MOEE, 1994

Values shown in **BOLD** exceed ODWS

N/V - No Value. No maximum concentration assigned.

NT - Not Tested, no analysis completed for this parameter/sample

Analyses completed at ALS Laboratory Group in Waterloo, ON

2-Chloroethylvinyl Ether	N/V	N/V	N/V	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	N/V	N/V	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Acetone	N/V	300	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Benzene	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromodichloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromoform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromomethane	N/V	10	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Carbon Disulfide	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Carbon tetrachloride	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chlorobenzene	N/V	30	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloroethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Chloroform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
cis-1,2-Dichloroethylene	N/V	70	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
cis-1,3-Dichloropropene	N/V	1.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dibromochloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	2.8	NT	2.8	NT	2.8	NT	2.8	NT	NT	NT	NT	NT
Dichlorodifluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Dichloromethane	50	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Ethyl Benzene	2.4	2.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
m+p-Xylenes	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Methyl Ethyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Methyl Isobutyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
MTBE	N/V	700	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
o-Xylene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Styrene	N/V	100	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Tetrachloroethylene	30	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Toluene	24	24	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,2-Dichloroethylene	N/V	0.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,3-Dichloropropene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichloroethylene	50	50	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichlorofluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Trihalomethanes (total)	100	N/V	N/V	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT
Vinyl chloride	2	1.3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Xylenes (Total)	300	300	N/V	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT

Notes:

OWDS - Ontario Drinking Water Standards (mg/L) from Ont. Reg. 169/03

SCS - Table 2 Site Condition Standards (mg/L) from Ont. Reg. 153/04

RUP - Reasonable Use Policy from Guideline B-7, MOEE, 1994

Values shown in **BOLD** exceed ODWS

N/V - No Value. No maximum concentration assigned.

NT - Not Tested, no analysis completed for this parameter/sample

Analyses completed at ALS Laboratory Group in Waterloo, ON

2-Chloroethylvinyl Ether	N/V	N/V	N/V	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	N/V	N/V	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Acetone	N/V	300	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Benzene	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromodichloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromoform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromomethane	N/V	10	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Carbon Disulfide	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Carbon tetrachloride	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chlorobenzene	N/V	30	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloroethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	NT	NT	NT	NT
Chloroform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
cis-1,2-Dichloroethylene	N/V	70	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
cis-1,3-Dichloropropene	N/V	1.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dibromochloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dichlorodifluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Dichloromethane	50	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	1	NT
Ethyl Benzene	2.4	2.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
m+p-Xylenes	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Methyl Ethyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Methyl Isobutyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
MTBE	N/V	700	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
o-Xylene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Styrene	N/V	100	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Tetrachloroethylene	30	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Toluene	24	24	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,2-Dichloroethylene	N/V	0.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,3-Dichloropropene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichloroethylene	50	50	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichlorofluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Trihalomethanes (total)	100	N/V	N/V	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT
Vinyl chloride	2	1.3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Xylenes (Total)	300	300	N/V	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT

Notes:

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Values shown in **BOLD** exceed ODWS

N/V - No Value. No maximum concentration assigned.

NT - Not Tested, no analysis completed for this parameter/sample

Analyses completed at ALS Laboratory Group in Waterloo, ON

2-Chloroethylvinyl Ether	N/V	N/V	N/V	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	N/V	N/V	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Acetone	N/V	300	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Benzene	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromodichloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromoform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromomethane	N/V	10	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Carbon Disulfide	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Carbon tetrachloride	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chlorobenzene	N/V	30	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloroethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Chloroform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
cis-1,2-Dichloroethylene	N/V	70	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
cis-1,3-Dichloropropene	N/V	1.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dibromochloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dichlorodifluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Dichloromethane	50	5	N/V	<0.5	NT	<0.5	NT	2.4	NT	2.4	NT	<2	NT	<2	NT	<2	NT	1.1	NT
Ethyl Benzene	2.4	2.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
m+p-Xylenes	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Methyl Ethyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Methyl Isobutyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
MTBE	N/V	700	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
o-Xylene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Styrene	N/V	100	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Tetrachloroethylene	30	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Toluene	24	24	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,2-Dichloroethylene	N/V	0.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,3-Dichloropropene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichloroethylene	50	50	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichlorofluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Trihalomethanes (total)	100	N/V	N/V	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT
Vinyl chloride	2	1.3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Xylenes (Total)	300	300	N/V	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT

Notes:

OWDS - Ontario Drinking Water Standards (mg/L) from Ont. Reg. 169/03

SCS - Table 2 Site Condition Standards (mg/L) from Ont. Reg. 153/04

RUP - Reasonable Use Policy from Guideline B-7, MOEE, 1994

Values shown in **BOLD** exceed ODWS

N/V - No Value. No maximum concentration assigned.

NT - Not Tested, no analysis completed for this parameter/sample

Analyses completed at ALS Laboratory Group in Waterloo, ON

2-Chloroethylvinyl Ether	N/V	N/V	N/V	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	N/V	N/V	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Acetone	N/V	300	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Benzene	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromodichloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromoform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromomethane	N/V	10	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Carbon Disulfide	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Carbon tetrachloride	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chlorobenzene	N/V	30	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloroethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Chloroform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
cis-1,2-Dichloroethylene	N/V	70	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
cis-1,3-Dichloropropene	N/V	1.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dibromochloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dichlorodifluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Dichloromethane	50	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	1.2	NT
Ethyl Benzene	2.4	2.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
m+p-Xylenes	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Methyl Ethyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Methyl Isobutyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
MTBE	N/V	700	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
o-Xylene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Styrene	N/V	100	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Tetrachloroethylene	30	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Toluene	24	24	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,2-Dichloroethylene	N/V	0.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,3-Dichloropropene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichloroethylene	50	50	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichlorofluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Trihalomethanes (total)	100	N/V	N/V	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT
Vinyl chloride	2	1.3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Xylenes (Total)	300	300	N/V	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT

Notes:

OWDS - Ontario Drinking Water Standards (mg/L) from Ont. Reg. 169/03

SCS - Table 2 Site Condition Standards (mg/L) from Ont. Reg. 153/04

RUP - Reasonable Use Policy from Guideline B-7, MOEE, 1994

Values shown in **BOLD** exceed ODWS

N/V - No Value. No maximum concentration assigned.

NT - Not Tested, no analysis completed for this parameter/sample

Analyses completed at ALS Laboratory Group in Waterloo, ON

2-Chloroethylvinyl Ether	N/V	N/V	N/V	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	N/V	N/V	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Acetone	N/V	300	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Benzene	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromodichloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromoform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromomethane	N/V	10	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Carbon Disulfide	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Carbon tetrachloride	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chlorobenzene	N/V	30	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloroethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	NT	NT	NT	NT
Chloroform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
cis-1,2-Dichloroethylene	N/V	70	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
cis-1,3-Dichloropropene	N/V	1.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dibromochloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dichlorodifluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Dichloromethane	50	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	2.5	NT	2.5	NT	2.5	NT	2.5	NT	1.5	NT
Ethyl Benzene	2.4	2.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
m+p-Xylenes	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Methyl Ethyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Methyl Isobutyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
MTBE	N/V	700	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
o-Xylene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Styrene	N/V	100	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Tetrachloroethylene	30	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Toluene	24	24	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,2-Dichloroethylene	N/V	0.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,3-Dichloropropene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichloroethylene	50	50	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichlorofluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Trihalomethanes (total)	100	N/V	N/V	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT
Vinyl chloride	2	1.3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Xylenes (Total)	300	300	N/V	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT

Notes:

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Values shown in **BOLD** exceed ODWS

N/V - No Value. No maximum concentration assigned.

NT - Not Tested, no analysis completed for this parameter/sample

Analyses completed at ALS Laboratory Group in Waterloo, ON

2-Chloroethylvinyl Ether	N/V	N/V	N/V	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	N/V	N/V	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Acetone	N/V	300	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Benzene	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromodichloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromoform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromomethane	N/V	10	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Carbon Disulfide	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Carbon tetrachloride	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chlorobenzene	N/V	30	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloroethane	N/V	N/V	N/V	<1.0	NT	<1.0	NT	<1.0	NT	<1.0	NT	<1.0	NT	<1.0	NT	NT	NT	NT	NT
Chloroform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
cis-1,2-Dichloroethylene	N/V	70	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
cis-1,3-Dichloropropene	N/V	1.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dibromochloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dichlorodifluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Dichloromethane	50	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	3.1	NT	<2	NT	<2	NT	<2	NT	<2	NT
Ethyl Benzene	2.4	2.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
m+p-Xylenes	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Methyl Ethyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Methyl Isobutyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
MTBE	N/V	700	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
o-Xylene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Styrene	N/V	100	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Tetrachloroethylene	30	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Toluene	24	24	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,2-Dichloroethylene	N/V	0.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,3-Dichloropropene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichloroethylene	50	50	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichlorofluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Trihalomethanes (total)	100	N/V	N/V	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT
Vinyl chloride	2	1.3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Xylenes (Total)	300	300	N/V	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT

Notes:

OWDS - Ontario Drinking Water Standards (mg/L) from Ont. Reg. 169/03

SCS - Table 2 Site Condition Standards (mg/L) from Ont. Reg. 153/04

RUP - Reasonable Use Policy from Guideline B-7, MOEE, 1994

Values shown in **BOLD** exceed ODWS

N/V - No Value. No maximum concentration assigned.

NT - Not Tested, no analysis completed for this parameter/sample

Analyses completed at ALS Laboratory Group in Waterloo, ON

2-Chloroethylvinyl Ether	N/V	N/V	N/V	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
2-Hexanone	N/V	N/V	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Acetone	N/V	300	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Benzene	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromodichloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromoform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Bromomethane	N/V	10	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Carbon Disulfide	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Carbon tetrachloride	5	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chlorobenzene	N/V	30	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloroethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Chloroform	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Chloromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
cis-1,2-Dichloroethylene	N/V	70	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
cis-1,3-Dichloropropene	N/V	1.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dibromochloromethane	N/V	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Dichlorodifluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Dichloromethane	50	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Ethyl Benzene	2.4	2.4	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
m+p-Xylenes	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Methyl Ethyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
Methyl Isobutyl Ketone	N/V	350	N/V	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT	<20	NT
MTBE	N/V	700	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
o-Xylene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Styrene	N/V	100	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Tetrachloroethylene	30	5	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Toluene	24	24	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,2-Dichloroethylene	N/V	0.1	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
trans-1,3-Dichloropropene	N/V	N/V	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichloroethylene	50	50	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Trichlorofluoromethane	N/V	N/V	N/V	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT	<1	NT
Trihalomethanes (total)	100	N/V	N/V	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT	<2	NT
Vinyl chloride	2	1.3	N/V	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT	<0.5	NT
Xylenes (Total)	300	300	N/V	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT	<1.5	NT

Notes:

OWDS - Ontario Drinking Water Standards (mg/L) from Ont. Reg. 169/03

SCS - Table 2 Site Condition Standards (mg/L) from Ont. Reg. 153/04

RUP - Reasonable Use Policy from Guideline B-7, MOEE, 1994

Values shown in **BOLD** exceed ODWS

N/V - No Value. No maximum concentration assigned.

NT - Not Tested, no analysis completed for this parameter/sample

Analyses completed at ALS Laboratory Group in Waterloo, ON

APPENDIX C

LABORATORY CERTIFICATES OF ANALYSIS



CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p>Work Order : WT2311786</p> <p>Client : Bluewater Geoscience Consultants Inc.</p> <p>Contact : Breton Lemieux</p> <p>Address : 42 Shadyridge Place Kitchener ON Canada N2N 3J1</p> <p>Telephone : 519 744 4123</p> <p>Project : BG-850</p> <p>PO : ----</p> <p>C-O-C number : ----</p> <p>Sampler : BJL</p> <p>Site : ----</p> <p>Quote number : SOA</p> <p>No. of samples received : 19</p> <p>No. of samples analysed : 19</p>	<p>Page : 1 of 88</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Gayle Braun</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 04-May-2023 13:50</p> <p>Date Analysis Commenced : 04-May-2023</p> <p>Issue Date : 12-May-2023 16:02</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Andrea Armstrong	Department Manager - Air Quality and Volatiles	VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre
CU	colour units (1 cu = 1 mg/l pt)
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units

>: greater than.

<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

Accreditation

<i>Accreditation</i>	<i>Description</i>	<i>Laboratory</i>	<i>Address</i>
A	CALA ISO/IEC 17025:2017	WT Waterloo - Environmental	60 Northland Road, Unit 1, Waterloo, Ontario

Applicable accreditations are indicated in the Method/Lab column as superscripts.

Qualifiers

<i>Qualifier</i>	<i>Description</i>
DLDS	<i>Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.</i>
DLHC	<i>Detection Limit Raised: Dilution required due to high concentration of test analyte(s).</i>
DLM	<i>Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).</i>
DLUI	<i>Detection Limit Raised: Unknown interference generated an apparent false positive test result.</i>
OWP	<i>Organic water sample contained visible sediment (must be included as part of analysis). Measured concentrations of organic substances in water can be biased high due to presence of sediment.</i>
TMV	<i>Turbidity exceeded upper limit of the nephelometric method. Minimum value reported.</i>
VOCHS	<i>VOC analysis was conducted for a water sample that contained > 5% headspace. Results may be biased low.</i>



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-1	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-001						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	374	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	83.5	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	632	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	440	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	7.74	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	373	DLDS 500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	27.2	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	<0.0050	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	1.23	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.031	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	0.048	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	0.0030	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	5.74	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0109	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00024	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0461	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.113	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000150	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	102	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00027	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00095	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-001 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	0.161	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000156	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0027	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	45.1	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.0253	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000243	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00165	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	4.61	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00143	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000116	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	5.17	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	8.80	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.191	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	8.62	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000070	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	0.00011	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000673	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0152	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-001 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	<1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-001 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	94.9	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	98.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-1	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	83.5 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	440 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	27.2 NTU	5 NTU

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-2S	ONDWS AO/OG	ONDWS MAC				
				Sub-Matrix: Water (Matrix: Water)	Sampling date/time						
					WT2311786-002						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	627	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	135	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	1030	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	662	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	7.64	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	584	DLDS 500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	51.5	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	<0.0050	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	<0.50	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.023	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	<0.020	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	16.2	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0085	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00253	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0833	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.322	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	<0.0000050	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	145	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00169	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00032	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-002 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	1.40	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000262	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0074	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	72.8	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.225	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000283	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00483	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	3.40	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00112	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000872	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	8.11	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	14.1	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.228	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	8.45	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000094	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	0.00040	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000662	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0048	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00028	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-002 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	<1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-002 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	95.0	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	98.4	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-2S	Water	Alkalinity, total (as CaCO3)		ONDWS	AO/OG	627 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	135 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	662 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	584 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	51.5 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	1.40 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.225 mg/L	0.05 mg/L



Key:

ONDWS	Ontario Drinking Water Regulation (JAN, 2020)
AO/OG	Aesthetic Objective/Operational Guideline
MAC	Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-2D	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-003						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	723	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	350 DLHC	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	1380	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	571	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	7.81	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	705 DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	78.4	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	14.4 DLHC	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	38.7 DLDS	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	<0.100 DLDS	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	<0.100 DLDS	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.050 DLDS	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	48.2 DLDS	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0174	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00934	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.189	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.455	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000066	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	124	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00617	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00072	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-003 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	5.80	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000460	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0033	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	63.5	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.664	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000704	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.0172	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	11.7	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00320	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000393	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	6.94	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	36.1	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.334	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	15.1	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000182	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00060	DLUI	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000970	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0127	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00080	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	0.73	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-003 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	0.75	VOCHS	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	0.62	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	<1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-003 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	95.3	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-2D	Water	Alkalinity, total (as CaCO3)		ONDWS	AO/OG	723 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	350 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	571 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	705 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	78.4 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	5.80 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.664 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	36.1 mg/L	20 mg/L



Key:

ONDWS	Ontario Drinking Water Regulation (JAN, 2020)
AO/OG	Aesthetic Objective/Operational Guideline
MAC	Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-3S	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-004						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	374	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	425	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	591	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	458	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	7.62	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	339	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	138	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	0.0056	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	<0.50	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.022	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	<0.020	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	1.84	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.302	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00162	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.115	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	0.000026	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.205	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000264	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	124	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	0.000024	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	0.00068	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00073	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00208	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-004 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	3.46	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.00210	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0017	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	36.1	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.269	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000239	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00136	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	7.09	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00216	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000356	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	4.42	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	12.2	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.276	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	8.42	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000010	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	0.00012	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	0.0106	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000468	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	0.00092	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0068	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00079	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-004 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	<1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-004 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	93.8	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-3S	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	425 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	458 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	138 NTU	5 NTU
	Water	Aluminum, dissolved	There is no consistent, convincing evidence that aluminum in drinking water causes adverse health effects in humans. The operational guideline applies to treatment plants using aluminum-based coagulants; it does not apply to naturally occurring aluminum found in groundwater. For treatment plants using aluminum-based coagulants, monthly samples should be taken of the water leaving the plant; the OGs are based on a running annual average of monthly samples.	ONDWS	AO/OG	0.302 mg/L	0.1 mg/L
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	3.46 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.269 mg/L	0.05 mg/L



Key:

ONDWS	Ontario Drinking Water Regulation (JAN, 2020)
AO/OG	Aesthetic Objective/Operational Guideline
MAC	Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-3D		ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00	WT2311786-005						
Physical Tests												
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	917	DLHC	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	1000	DLHC	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	1830		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	625		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	7.47		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	940	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	224		5 NTU	--	--	--	--	--
Anions and Nutrients												
Ammonia, total (as N)	E298/WT		0.0050	mg/L	37.5	DLHC	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	44.4	DLDS	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	<0.100	DLDS	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	<0.100	DLDS	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.050	DLDS	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	102	DLDS	500 mg/L	--	--	--	--	--
Dissolved Metals												
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0263		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00643		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.413		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.693		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000070		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	149		--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	0.00079		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00066		--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00083		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-005 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	15.0	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000361	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0015	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	61.4	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.578	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000212	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00288	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	25.2	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00579	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.00428	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	6.07	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	40.9	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.556	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	30.1	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000012	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00090	DLUI	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000338	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	0.00086	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0042	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00190	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	1.41	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-005 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	0.69	VOCHS	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	<1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-005 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	1.4	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	94.8	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	98.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-3D	Water	Alkalinity, total (as CaCO3)		ONDWS	AO/OG	917 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	1000 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	625 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	940 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	224 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	15.0 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.578 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	40.9 mg/L	20 mg/L
	Water	Benzene	Health basis of MAC: Bone marrow (red and white blood cell) changes and cancer (classified as human carcinogen). Other: Blood system and immunological responses.	ONDWS	MAC	1.41 µg/L	1 µg/L

Key:
 ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-5	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-006						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	246	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	94.0	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	413	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	250	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	8.20	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	212	DLDS 500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	74.4	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	0.0076	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	1.40	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.044	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	0.175	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	0.0094	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	0.61	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0060	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00019	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0152	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.028	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000126	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	65.2	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00013	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00137	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-006 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	0.024	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000245	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	21.2	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.0228	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000241	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00052	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	1.88	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00066	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000108	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	2.15	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	2.29	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.0798	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	1.12	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000275	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0047	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-006 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	<1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-006 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	93.1	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	98.2	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-5	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	94.0 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	250 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	74.4 NTU	5 NTU

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-7S	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-007						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	654	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	7310 DLHC DLM	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	1120	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	629	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	7.79	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	727 DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	>4000 TMV	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	0.0527	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	17.2	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.048	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	<0.020	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	136	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0479	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	0.00021	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00058	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0964	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.115	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000893	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	172	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00049	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.0128	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-007 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	0.376	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000729	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	48.4	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.277	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000649	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00422	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	2.71	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00050	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000291	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	4.10	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	10.7	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.251	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	46.9	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	0.00011	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	0.00160	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.00492	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0600	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00072	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-007 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	<1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-007 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	94.4	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-7S	Water	Alkalinity, total (as CaCO3)		ONDWS	AO/OG	654 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	7310 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	629 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	727 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	>4000	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	0.376 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.277 mg/L	0.05 mg/L



Key:

ONDWS	Ontario Drinking Water Regulation (JAN, 2020)
AO/OG	Aesthetic Objective/Operational Guideline
MAC	Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID								
				OW-7D	ONDWS AO/OG	ONDWS MAC						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time								
				WT2311786-008	04-May-2023 00:00							
Physical Tests												
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	625	DLDS	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	188	DLDS	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	1340		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	644		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	7.94		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	749	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	49.4		5 NTU	--	--	--	--	--
Anions and Nutrients												
Ammonia, total (as N)	E298/WT		0.0050	mg/L	7.72	DLHC	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	38.8	DLDS	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	<0.100	DLDS	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	3.56	DLDS	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.050	DLDS	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	104	DLDS	500 mg/L	--	--	--	--	--
Dissolved Metals												
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0130		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	0.00011		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00105		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.126		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.464		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000229		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	139		--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00132		--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00160		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-008 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	1.92	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000339	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0031	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	72.1	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.135	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000449	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00821	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	22.7	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00678	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000120	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	6.25	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	29.0	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.396	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	38.6	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000446	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00060	DLUI	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.00143	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0744	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00042	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-008 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-008 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	94.0	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	98.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-7D	Water	Alkalinity, total (as CaCO3)		ONDWS	AO/OG	625 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	188 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	644 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	749 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	49.4 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	1.92 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.135 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	29.0 mg/L	20 mg/L



Key:

ONDWS	Ontario Drinking Water Regulation (JAN, 2020)
AO/OG	Aesthetic Objective/Operational Guideline
MAC	Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-B	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-009						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	387	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	25.1	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	1380	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	757	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	7.92	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	1060 DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	10.9	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	<0.0050	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	4.76 DLDS	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	<0.100 DLDS	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	1.76 DLDS	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.050 DLDS	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	433 DLDS	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0284	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	0.00011	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00044	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0660	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.498	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000183	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	184	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00028	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00223	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-009 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	0.296	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000155	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	72.2	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.0628	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000363	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00068	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	9.15	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00079	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000192	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	3.48	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	11.4	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.401	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	127	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	0.00066	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000662	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0065	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-009 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-009 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	93.5	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	98.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-B	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	25.1 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	757 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	1060 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	10.9 NTU	5 NTU
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.0628 mg/L	0.05 mg/L

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-10S	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-010						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	335	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	2110 DLHC	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	379	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	226	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	8.15	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	212 DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	1400	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	0.0238	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	1.26	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.070	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	0.032	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	8.71	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0433	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00015	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0287	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.024	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000200	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	54.7	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00020	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00141	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-010 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	0.046	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000261	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	21.6	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.144	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000398	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00116	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	0.650	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00053	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000118	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	1.95	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	2.13	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.0630	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	2.68	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000068	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00200	DLUI	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000497	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0047	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-010 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	1.1	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-010 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	92.6	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.5	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-10S	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	2110 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	226 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	1400 NTU	5 NTU
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.144 mg/L	0.05 mg/L

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID									
				OW-10S	Sub-Matrix: Water	Sampling date/time	ONDWS AO/OG	ONDWS MAC					
				WT2311786-011	04-May-2023 00:00								
Physical Tests													
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	293		30 - 500 mg/L	--	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	99.8		5 CU	--	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	526		--	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	299		80 - 100 mg/L	--	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	8.02		6.5 - 8.5 pH units	--	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	304	DLDS	500 mg/L	--	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	30.6		5 NTU	--	--	--	--	--	--
Anions and Nutrients													
Ammonia, total (as N)	E298/WT		0.0050	mg/L	1.34	DLHC	--	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	4.98		250 mg/L	--	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.052		--	1.5 mg/L	--	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	0.054		--	10 mg/L	--	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	0.030		--	1 mg/L	--	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010		--	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	8.20		500 mg/L	--	--	--	--	--	--
Dissolved Metals													
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0082		0.1 mg/L	--	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00015		--	0.01 mg/L	--	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0976		--	1 mg/L	--	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020		--	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050		--	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.066		--	5 mg/L	--	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000670		--	0.005 mg/L	--	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	71.4		--	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010		--	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00085		--	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00410		1 mg/L	--	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-011 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	0.025	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000454	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0014	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	29.4	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.749	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000707	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00471	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	2.03	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00168	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000068	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	3.21	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	5.68	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.107	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	3.42	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000318	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000441	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0207	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-011 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-011 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	91.8	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-10S	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	99.8 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	299 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	30.6 NTU	5 NTU
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.749 mg/L	0.05 mg/L

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-12S	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-012						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	296	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	607 DLHC	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	572	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	299	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	8.25	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	334 DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	439	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	<0.0050	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	6.18	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.058	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	0.352	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	37.6	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0213	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00016	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0151	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.051	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000234	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	76.5	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	<0.00010	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00142	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-012 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	0.018	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000368	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	26.2	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.00439	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000148	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00063	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	1.32	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00059	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000099	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	1.82	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	4.54	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.0960	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	11.9	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000017	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00090	DLUI	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000548	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0039	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-012 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	1.2	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-012 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	92.3	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-12S	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	607 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	299 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	439 NTU	5 NTU

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-12D	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-013						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	287	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	57.1	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	578	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	285	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	8.23	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	328	DLDS 500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	8.28	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	0.0082	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	6.59	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.050	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	0.460	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	37.9	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0024	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00018	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0158	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.055	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000386	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	74.2	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	<0.00010	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00192	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-013 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	<0.010	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000151	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	24.2	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.00428	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000216	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00085	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	1.24	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00059	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000146	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	1.92	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	4.77	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.100	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	10.8	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000044	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	0.00016	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.00101	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0106	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-013 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	1.3	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-013 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	92.2	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-12D	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	57.1 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	285 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	8.28 NTU	5 NTU

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-13S	ONDWS AO/OG	ONDWS MAC				
				Sub-Matrix: Water (Matrix: Water)	Sampling date/time						
					WT2311786-014						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	294	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	3500 DLHC DLM	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	297	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	199	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	8.06	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	209 DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	1200	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	0.0064	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	1.02	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.052	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	<0.020	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	3.20	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0454	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00042	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0151	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.021	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000066	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	47.5	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00015	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00112	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-014 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	0.234	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000680	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	19.5	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.0253	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000558	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00066	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	0.748	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00049	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000175	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	1.64	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	1.98	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.0716	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	3.83	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000014	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	0.00158	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000270	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0213	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-014 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	1.5	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-014 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	92.1	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-13S	Water	Colour, apparent	<p>May interfere with disinfection; removal is important to ensure effective treatment.</p> <p>Hardness levels between 80 and 100 mg/L (as CaCO₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.</p> <p>Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.</p>	ONDWS	AO/OG	3500 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved		ONDWS	AO/OG	199 mg/L	80-100 mg/L
	Water	Turbidity		ONDWS	AO/OG	1200 NTU	5 NTU

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-13D	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-015						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	476	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	321 DLHC	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	778	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	404	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	8.15	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	439 DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	128	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	1.25 DLHC	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	6.11	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.042	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	0.394	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	0.030	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	42.6	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0059	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00118	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0517	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.087	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000149	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	103	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00024	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00157	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-015 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	1.07	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.00235	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	35.7	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.103	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000641	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00205	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	2.97	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00142	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000319	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	4.19	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	6.60	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.193	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	13.9	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000061	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000630	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0959	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00031	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-015 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	1.6	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-015 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	92.1	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	98.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-13D	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	321 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	404 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	128 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	1.07 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.103 mg/L	0.05 mg/L

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-16S	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-016						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	314	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	740	DLHC 5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	482	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	283	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	8.11	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	282	DLDS 500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	280	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	0.0053	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	8.08	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.062	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	0.429	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	0.0027	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	3.72	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0033	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00032	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0302	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.046	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000202	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	72.8	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00025	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00167	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-016 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	0.033	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000442	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0013	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	24.5	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.0482	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000696	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00112	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	2.51	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00103	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000060	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	4.83	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	4.52	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.118	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	3.05	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000032	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.000780	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0060	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	OWP	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	OWP	--	1 µg/L	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	OWP	--	2 µg/L	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	OWP	30 µg/L	80 µg/L	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-016 (Continued)		ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued											
Chloroform	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	OWP	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	OWP	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	OWP	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	OWP	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	OWP	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	<1.0	OWP	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	OWP	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	OWP	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	OWP	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	OWP	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	OWP	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	OWP	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	OWP	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	OWP	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	OWP	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	OWP	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	OWP	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	OWP	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50		300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-016 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	91.5	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.3	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-16S	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	740 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	283 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	280 NTU	5 NTU

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-16D		ONDWS AO/OG	ONDWS MAC			
				Sampling date/time	04-May-2023 00:00	WT2311786-017					
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	704		30 - 500 mg/L	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	631	DLHC	5 CU	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	1190		--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	547		80 - 100 mg/L	--	--	--	--
pH	E108/WT	A	0.10	pH units	7.90		6.5 - 8.5 pH units	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	618	DLDS	500 mg/L	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	222		5 NTU	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	8.96	DLHC	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	32.6	DLDS	250 mg/L	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	<0.100	DLDS	--	1.5 mg/L	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	0.200	DLDS	--	10 mg/L	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	0.668	DLDS	--	1 mg/L	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010		--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	48.1	DLDS	500 mg/L	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0047		0.1 mg/L	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00112		--	0.01 mg/L	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.136		--	1 mg/L	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020		--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050		--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.348		--	5 mg/L	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.000173		--	0.005 mg/L	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	120		--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	0.000013		--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00176		--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00273		1 mg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-017 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	0.547	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.00412	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0036	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	60.0	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.416	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000601	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00650	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	16.6	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00633	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000063	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	5.82	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	23.8	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.306	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	17.2	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000248	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	0.00023	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.00115	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0143	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00035	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-017 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	<1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-017 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	91.3	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-16D	Water	Alkalinity, total (as CaCO3)		ONDWS	AO/OG	704 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	631 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	547 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	618 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	222 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	0.547 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.416 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	23.8 mg/L	20 mg/L



Key:

ONDWS	Ontario Drinking Water Regulation (JAN, 2020)
AO/OG	Aesthetic Objective/Operational Guideline
MAC	Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-20S		ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00	WT2311786-018						
Physical Tests												
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	704		30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	265	DLHC	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	1400		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	617		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	7.78		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	791	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	52.1		5 NTU	--	--	--	--	--
Anions and Nutrients												
Ammonia, total (as N)	E298/WT		0.0050	mg/L	10.4	DLHC	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	30.1	DLDS	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	<0.100	DLDS	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	<0.100	DLDS	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.050	DLDS	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	155	DLDS	500 mg/L	--	--	--	--	--
Dissolved Metals												
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.0269		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00333		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.128		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.429		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000057		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	131		--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00369		--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00027		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-018 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	2.64	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000862	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0043	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	70.3	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.642	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000765	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00771	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	17.6	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00478	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000085	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	6.10	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	29.5	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.404	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	43.8	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000266	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	0.00074	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.00108	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0076	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00049	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	--	2 µg/L	--	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	30 µg/L	80 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-018 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
Chloroform	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	<1.0	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50	300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-018 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	87.8	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	98.3	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-20S	Water	Alkalinity, total (as CaCO3)		ONDWS	AO/OG	704 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	265 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	617 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	791 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	52.1 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	2.64 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.642 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	29.5 mg/L	20 mg/L



Key:

ONDWS	Ontario Drinking Water Regulation (JAN, 2020)
AO/OG	Aesthetic Objective/Operational Guideline
MAC	Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-20D	ONDWS AO/OG	ONDWS MAC				
				Sampling date/time	04-May-2023 00:00						
Sub-Matrix: Water (Matrix: Water)					WT2311786-019						
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	A	1.0	mg/L	443	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	A	2.0	CU	3890 DLHC DLM	5 CU	--	--	--	--	--
Conductivity	E100/WT		1.0	µS/cm	698	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT		0.50	mg/L	355	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	A	0.10	pH units	8.16	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	A	10	mg/L	414 DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	A	0.10	NTU	>4000 TMV	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT		0.0050	mg/L	0.122	--	--	--	--	--	--
Chloride	E235.Cl/WT	A	0.50	mg/L	7.72	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	A	0.020	mg/L	0.195	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	A	0.020	mg/L	0.076	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	A	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT		0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	A	0.30	mg/L	36.8	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	A	0.0010	mg/L	0.134	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	A	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	A	0.00010	mg/L	0.00151	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	A	0.00010	mg/L	0.0439	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT		0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT		0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	A	0.010	mg/L	0.078	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	A	0.0000050	mg/L	0.0000114	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT		0.050	mg/L	72.1	--	--	--	--	--	--
Cesium, dissolved	E421/WT		0.000010	mg/L	0.000014	--	--	--	--	--	--
Chromium, dissolved	E421/WT	A	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT		0.00010	mg/L	0.00044	--	--	--	--	--	--
Copper, dissolved	E421/WT	A	0.00020	mg/L	0.00159	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-019 (Continued)	ONDWS AO/OG	ONDWS MAC				
Dissolved Metals - Continued										
Iron, dissolved	E421/WT A	0.010	mg/L	0.494	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT A	0.000050	mg/L	0.000496	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0068	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	42.4	--	--	--	--	--	--
Manganese, dissolved	E421/WT A	0.00010	mg/L	0.164	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.00212	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00088	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	1.21	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00089	--	--	--	--	--	--
Selenium, dissolved	E421/WT A	0.000050	mg/L	0.000053	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	6.74	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT A	0.050	mg/L	32.1	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.200	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	11.8	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000010	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00600	DLUI	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	0.00031	--	--	--	--	--	--
Uranium, dissolved	E421/WT A	0.000010	mg/L	0.00227	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT A	0.0010	mg/L	0.0030	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00021	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--
Volatile Organic Compounds										
Acetone	E611D/WT	20	µg/L	<20	OWP	--	--	--	--	--
Benzene	E611D/WT A	0.50	µg/L	<0.50	OWP	--	1 µg/L	--	--	--
Bromodichloromethane	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--
Bromoform	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--
Bromomethane	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--
Carbon tetrachloride	E611D/WT A	0.20	µg/L	<0.20	OWP	--	2 µg/L	--	--	--
Chlorobenzene	E611D/WT A	0.50	µg/L	<0.50	OWP	30 µg/L	80 µg/L	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-019 (Continued)		ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued											
Chloroform	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dibromochloromethane	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dibromoethane, 1,2-	E611D/WT	0.20	µg/L	<0.20	OWP	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611D/WT A	0.50	µg/L	<0.50	OWP	3 µg/L	200 µg/L	--	--	--	--
Dichlorobenzene, 1,3-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611D/WT A	0.50	µg/L	<0.50	OWP	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloroethane, 1,1-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloroethane, 1,2-	E611D/WT A	0.50	µg/L	<0.50	OWP	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611D/WT A	0.50	µg/L	<0.50	OWP	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloromethane	E611D/WT A	1.0	µg/L	<1.0	OWP	--	50 µg/L	--	--	--	--
Dichloropropane, 1,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611D/WT	0.30	µg/L	<0.30	OWP	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D/WT	0.30	µg/L	<0.30	OWP	--	--	--	--	--	--
Ethylbenzene	E611D/WT A	0.50	µg/L	<0.50	OWP	2.4 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611D/WT	20	µg/L	<20	OWP	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611D/WT	20	µg/L	<20	OWP	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611D/WT A	0.50	µg/L	<0.50	OWP	--	15 µg/L	--	--	--	--
Styrene	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Tetrachloroethylene	E611D/WT A	0.50	µg/L	<0.50	OWP	--	10 µg/L	--	--	--	--
Toluene	E611D/WT A	0.50	µg/L	<0.50	OWP	24 µg/L	60 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Trichloroethylene	E611D/WT A	0.50	µg/L	<0.50	OWP	--	5 µg/L	--	--	--	--
Trichlorofluoromethane	E611D/WT	0.50	µg/L	<0.50	OWP	--	--	--	--	--	--
Vinyl chloride	E611D/WT A	0.50	µg/L	<0.50	OWP	--	1 µg/L	--	--	--	--
Xylene, m+p-	E611D/WT	0.40	µg/L	<0.40	OWP	--	--	--	--	--	--
Xylene, o-	E611D/WT	0.30	µg/L	<0.30	OWP	--	--	--	--	--	--
Xylenes, total	E611D/WT	0.50	µg/L	<0.50		300 µg/L	90 µg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2311786-019 (Continued)	ONDWS AO/OG	ONDWS MAC				
Volatile Organic Compounds - Continued										
BTEX, total	E611D/WT	1.0	µg/L	<1.0	--	--	--	--	--	--
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	E611D/WT	1.0	%	90.1	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D/WT	1.0	%	97.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-20D	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	3890 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	355 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	>4000	5 NTU
	Water	Aluminum, dissolved	There is no consistent, convincing evidence that aluminum in drinking water causes adverse health effects in humans. The operational guideline applies to treatment plants using aluminum-based coagulants; it does not apply to naturally occurring aluminum found in groundwater. For treatment plants using aluminum-based coagulants, monthly samples should be taken of the water leaving the plant; the OGs are based on a running annual average of monthly samples.	ONDWS	AO/OG	0.134 mg/L	0.1 mg/L
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	0.494 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.164 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	32.1 mg/L	20 mg/L



Key:

ONDWS	Ontario Drinking Water Regulation (JAN, 2020)
AO/OG	Aesthetic Objective/Operational Guideline
MAC	Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : WT2311786</p> <p>Client : Bluewater Geoscience Consultants Inc.</p> <p>Contact : Breton Lemieux</p> <p>Address : 42 Shadyridge Place Kitchener ON Canada N2N 3J1</p> <p>Telephone : 519 744 4123</p> <p>Project : BG-850</p> <p>PO : ----</p> <p>C-O-C number : ----</p> <p>Sampler : BJL</p> <p>Site : ----</p> <p>Quote number : SOA</p> <p>No. of samples received : 19</p> <p>No. of samples analysed : 19</p>	<p>Page : 1 of 38</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Gayle Braun</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 04-May-2023 13:50</p> <p>Issue Date : 12-May-2023 16:02</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Duplicate outliers occur.
- Method Blank value outliers occur - please see following pages for full details.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Method Blank (MB) Values								
Physical Tests	QC-MRG2-9268220 01	----	Alkalinity, total (as CaCO3)	----	E290	2.8 mg/L ^B	2 mg/L	Blank result exceeds permitted value
Volatile Organic Compounds	QC-MRG2-9264950 01	----	Dichloromethane	75-09-2	E611D	1.6 µg/L ^B	1 µg/L	Blank result exceeds permitted value

Result Qualifiers

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.

Laboratory Control Sample (LCS) Recoveries								
Volatile Organic Compounds	QC-928420-002	----	Dichlorodifluoromethane	75-71-8	E611D	142 % ^{MES}	60.0-140%	Recovery greater than upper control limit

Result Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).

Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Silver, dissolved	7440-22-4	E421	62.1 % ^{MES}	70.0-130%	Recovery less than lower data quality objective

Result Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: * = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) [ON MECP] OW-1	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) [ON MECP] OW-10S, OW-10S	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) [ON MECP] OW-12D	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) [ON MECP] OW-12S	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) [ON MECP] OW-13D	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) [ON MECP] OW-13S	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) [ON MECP] OW-16D	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-16S	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-20D	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-20S	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-2D	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-2S	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-3D	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-3S	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-5	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-7D	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-7S	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-B	E298	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-1	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-10S, OW-10S	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-12D	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-12S	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-13S	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-2D	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-2S	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-3D	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-3S	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-5	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-7D	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-7S	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-B	E235.Cl	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-13D	E235.Cl	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-16D	E235.Cl	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-16S	E235.Cl	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-20D	E235.Cl	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-20S	E235.Cl	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001											
HDPE [ON MECP] OW-1	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001											
HDPE [ON MECP] OW-10S, OW-10S	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001											
HDPE [ON MECP] OW-12D	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001											
HDPE [ON MECP] OW-12S	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001											
HDPE [ON MECP] OW-13D	E378-U	04-May-2023	08-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001											
HDPE [ON MECP] OW-13S	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	



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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001)											
HDPE [ON MECP] OW-16D	E378-U	04-May-2023	08-May-2023	----	----		08-May-2023	7 days	5 days	✓	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001)											
HDPE [ON MECP] OW-16S	E378-U	04-May-2023	08-May-2023	----	----		08-May-2023	7 days	5 days	✓	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001)											
HDPE [ON MECP] OW-20D	E378-U	04-May-2023	08-May-2023	----	----		08-May-2023	7 days	5 days	✓	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001)											
HDPE [ON MECP] OW-20S	E378-U	04-May-2023	08-May-2023	----	----		08-May-2023	7 days	5 days	✓	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001)											
HDPE [ON MECP] OW-2D	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✓	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001)											
HDPE [ON MECP] OW-2S	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✓	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001)											
HDPE [ON MECP] OW-3D	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✓	



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			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001)										
HDPE [ON MECP] OW-3S	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001)										
HDPE [ON MECP] OW-5	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001)										
HDPE [ON MECP] OW-7D	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001)										
HDPE [ON MECP] OW-7S	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔
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HDPE [ON MECP] OW-B	E378-U	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔
Anions and Nutrients : Fluoride in Water by IC										
HDPE [ON MECP] OW-1	E235.F	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔
Anions and Nutrients : Fluoride in Water by IC										
HDPE [ON MECP] OW-10S, OW-10S	E235.F	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔
Anions and Nutrients : Fluoride in Water by IC										
HDPE [ON MECP] OW-12D	E235.F	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔



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Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-12S	E235.F	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
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Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-3S	E235.F	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-5	E235.F	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-7D	E235.F	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-7S	E235.F	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	



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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-B	E235.F	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-13D	E235.F	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-16D	E235.F	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-16S	E235.F	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-20D	E235.F	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-20S	E235.F	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-1	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-10S, OW-10S	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-12D	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-12S	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-13S	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-2D	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-2S	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-3D	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-3S	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-5	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-7D	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-7S	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-B	E235.NO3	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-13D	E235.NO3	04-May-2023	08-May-2023	----	----		09-May-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-16D	E235.NO3	04-May-2023	08-May-2023	----	----		09-May-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-16S	E235.NO3	04-May-2023	08-May-2023	----	----		09-May-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-20D	E235.NO3	04-May-2023	08-May-2023	----	----		09-May-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-20S	E235.NO3	04-May-2023	08-May-2023	----	----		09-May-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-1	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-10S, OW-10S	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-12D	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-12S	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-13S	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-2D	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-2S	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-3D	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-3S	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-5	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-7D	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-7S	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-B	E235.NO2	04-May-2023	06-May-2023	----	----		08-May-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-13D	E235.NO2	04-May-2023	08-May-2023	----	----		09-May-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-16D	E235.NO2	04-May-2023	08-May-2023	----	----		09-May-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-16S	E235.NO2	04-May-2023	08-May-2023	----	----		09-May-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-20D	E235.NO2	04-May-2023	08-May-2023	----	----		09-May-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-20S	E235.NO2	04-May-2023	08-May-2023	----	----		09-May-2023	7 days	6 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-1	E235.SO4	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-10S, OW-10S	E235.SO4	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-12D	E235.SO4	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-12S	E235.S04	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-13S	E235.S04	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-2D	E235.S04	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-2S	E235.S04	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-3D	E235.S04	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-3S	E235.S04	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-5	E235.S04	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-7D	E235.S04	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-7S	E235.S04	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-B	E235.SO4	04-May-2023	06-May-2023	----	----		08-May-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-13D	E235.SO4	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-16D	E235.SO4	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-16S	E235.SO4	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-20D	E235.SO4	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-20S	E235.SO4	04-May-2023	08-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-1	E421	04-May-2023	05-May-2023	----	----		05-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-10S, OW-10S	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-12D	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-12S	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-13D	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-13S	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-16D	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-16S	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-20D	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-20S	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-2D	E421	04-May-2023	05-May-2023	----	----		05-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-2S	E421	04-May-2023	05-May-2023	----	----		05-May-2023	180 days	1 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-3D	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-3S	E421	04-May-2023	05-May-2023	----	----		05-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-5	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-7D	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-7S	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-B	E421	04-May-2023	04-May-2023	----	----		04-May-2023	180 days	1 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-1	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-10S, OW-10S	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-12D	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	



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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-12S	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-13S	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-2D	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-2S	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-3D	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-3S	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-5	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-7D	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-7S	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	



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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP] OW-B	E290	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP] OW-13D	E290	04-May-2023	08-May-2023	----	----		10-May-2023	14 days	7 days	✔
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP] OW-16D	E290	04-May-2023	08-May-2023	----	----		10-May-2023	14 days	7 days	✔
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP] OW-16S	E290	04-May-2023	08-May-2023	----	----		10-May-2023	14 days	7 days	✔
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP] OW-20D	E290	04-May-2023	08-May-2023	----	----		10-May-2023	14 days	7 days	✔
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP] OW-20S	E290	04-May-2023	08-May-2023	----	----		10-May-2023	14 days	7 days	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-1	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-10S, OW-10S	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-12D	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔



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Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-12S	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-13D	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-13S	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-16D	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-16S	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-20D	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-20S	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-2D	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-2S	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-3D	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-3S	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-5	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-7D	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-7S	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Colour (Apparent) by Spectrometer										
HDPE [ON MECP] OW-B	E330	04-May-2023	----	----	----		05-May-2023	48 hrs	36 hrs	✔
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-1	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-10S, OW-10S	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-12D	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-12S	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-13S	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-2D	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-2S	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-3D	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-3S	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-5	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-7D	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-7S	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-B	E100	04-May-2023	06-May-2023	----	----		09-May-2023	28 days	6 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-13D	E100	04-May-2023	08-May-2023	----	----		10-May-2023	28 days	7 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-16D	E100	04-May-2023	08-May-2023	----	----		10-May-2023	28 days	7 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-16S	E100	04-May-2023	08-May-2023	----	----		10-May-2023	28 days	7 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-20D	E100	04-May-2023	08-May-2023	----	----		10-May-2023	28 days	7 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-20S	E100	04-May-2023	08-May-2023	----	----		10-May-2023	28 days	7 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-1	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-10S, OW-10S	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-12D	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-12S	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-13S	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-2D	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-2S	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-3D	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-3S	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-5	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-7D	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-7S	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-B	E108	04-May-2023	06-May-2023	----	----		09-May-2023	14 days	6 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-13D	E108	04-May-2023	08-May-2023	----	----		10-May-2023	14 days	7 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-16D	E108	04-May-2023	08-May-2023	----	----		10-May-2023	14 days	7 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-16S	E108	04-May-2023	08-May-2023	----	----		10-May-2023	14 days	7 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-20D	E108	04-May-2023	08-May-2023	----	----		10-May-2023	14 days	7 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-20S	E108	04-May-2023	08-May-2023	----	----		10-May-2023	14 days	7 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-1	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-10S, OW-10S	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-12D	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-12S	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-13D	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-13S	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-16D	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-16S	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-20D	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-20S	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-2D	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-2S	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-3D	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-3S	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-5	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-7D	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-7S	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-B	E162	04-May-2023	----	----	----		05-May-2023	7 days	1 days	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-1	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-10S, OW-10S	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-12D	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-12S	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-13D	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-13S	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-16D	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-16S	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-20D	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-20S	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-2D	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-2S	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-3D	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-3S	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-5	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-7D	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-7S	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-B	E121	04-May-2023	----	----	----		05-May-2023	48 hrs	34 hrs	✔
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) OW-1	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) OW-10S, OW-10S	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) OW-12D	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) OW-12S	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) OW-13D	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) OW-13S	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) OW-2D	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) OW-2S	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) OW-3D	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) OW-3S	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) OW-5	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) OW-7D	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) OW-7S	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) OW-B	E611D	04-May-2023	08-May-2023	----	----		08-May-2023	14 days	4 days	✔
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) OW-16D	E611D	04-May-2023	09-May-2023	----	----		09-May-2023	14 days	6 days	✔
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) OW-16S	E611D	04-May-2023	09-May-2023	----	----		09-May-2023	14 days	6 days	✔
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) OW-20D	E611D	04-May-2023	09-May-2023	----	----		09-May-2023	14 days	6 days	✔
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) OW-20S	E611D	04-May-2023	09-May-2023	----	----		09-May-2023	14 days	6 days	✔

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: * = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		Evaluation
			QC	Regular	Actual	Expected	
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	925231	2	35	5.7	5.0	✓
Ammonia by Fluorescence	E298	926466	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	925238	2	34	5.8	5.0	✓
Colour (Apparent) by Spectrometer	E330	923842	1	19	5.2	5.0	✓
Conductivity in Water	E100	925232	2	24	8.3	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	923061	2	33	6.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	925239	2	40	5.0	5.0	✓
Fluoride in Water by IC	E235.F	925234	2	29	6.9	5.0	✓
Nitrate in Water by IC	E235.NO3	925235	2	34	5.8	5.0	✓
Nitrite in Water by IC	E235.NO2	925236	2	34	5.8	5.0	✓
pH by Meter	E108	925230	2	37	5.4	5.0	✓
Sulfate in Water by IC	E235.SO4	925237	2	28	7.1	5.0	✓
TDS by Gravimetry	E162	923412	1	19	5.2	5.0	✓
Turbidity by Nephelometry	E121	923544	2	22	9.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	926495	2	40	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	925231	2	35	5.7	5.0	✓
Ammonia by Fluorescence	E298	926466	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	925238	2	34	5.8	5.0	✓
Colour (Apparent) by Spectrometer	E330	923842	1	19	5.2	5.0	✓
Conductivity in Water	E100	925232	2	24	8.3	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	923061	2	33	6.0	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	925239	2	40	5.0	5.0	✓
Fluoride in Water by IC	E235.F	925234	2	29	6.9	5.0	✓
Nitrate in Water by IC	E235.NO3	925235	2	34	5.8	5.0	✓
Nitrite in Water by IC	E235.NO2	925236	2	34	5.8	5.0	✓
pH by Meter	E108	925230	2	37	5.4	5.0	✓
Sulfate in Water by IC	E235.SO4	925237	2	28	7.1	5.0	✓
TDS by Gravimetry	E162	923412	1	19	5.2	5.0	✓
Turbidity by Nephelometry	E121	923544	2	22	9.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	926495	2	40	5.0	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	925231	2	35	5.7	5.0	✓
Ammonia by Fluorescence	E298	926466	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	925238	2	34	5.8	5.0	✓



Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
Method Blanks (MB) - Continued							
Colour (Apparent) by Spectrometer	E330	923842	1	19	5.2	5.0	✔
Conductivity in Water	E100	925232	2	24	8.3	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	923061	2	33	6.0	5.0	✔
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	925239	2	40	5.0	5.0	✔
Fluoride in Water by IC	E235.F	925234	2	29	6.9	5.0	✔
Nitrate in Water by IC	E235.NO3	925235	2	34	5.8	5.0	✔
Nitrite in Water by IC	E235.NO2	925236	2	34	5.8	5.0	✔
Sulfate in Water by IC	E235.SO4	925237	2	28	7.1	5.0	✔
TDS by Gravimetry	E162	923412	1	19	5.2	5.0	✔
Turbidity by Nephelometry	E121	923544	2	22	9.0	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	926495	2	40	5.0	5.0	✔
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	926466	1	20	5.0	5.0	✔
Chloride in Water by IC	E235.Cl	925238	2	34	5.8	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	923061	2	33	6.0	5.0	✔
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	925239	2	40	5.0	5.0	✔
Fluoride in Water by IC	E235.F	925234	2	29	6.9	5.0	✔
Nitrate in Water by IC	E235.NO3	925235	2	34	5.8	5.0	✔
Nitrite in Water by IC	E235.NO2	925236	2	34	5.8	5.0	✔
Sulfate in Water by IC	E235.SO4	925237	2	28	7.1	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	926495	2	40	5.0	5.0	✔



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Conductivity in Water	E100 Waterloo - Environmental	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter	E108 Waterloo - Environmental	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Turbidity by Nephelometry	E121 Waterloo - Environmental	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
TDS by Gravimetry	E162 Waterloo - Environmental	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Chloride in Water by IC	E235.Cl Waterloo - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F Waterloo - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC	E235.NO2 Waterloo - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC	E235.NO3 Waterloo - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 Waterloo - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 Waterloo - Environmental	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ammonia by Fluorescence	E298 Waterloo - Environmental	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Colour (Apparent) by Spectrometer	E330 Waterloo - Environmental	Water	APHA 2120 C (mod)	Colour (Apparent) is measured in an unfiltered sample spectrophotometrically using the single wavelength method. The colour contribution of settleable solids are not included in the result. This method is intended for potable waters. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment.
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U Waterloo - Environmental	Water	APHA 4500-P F (mod)	Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter. Field filtration is recommended to ensure test results represent conditions at time of sampling.
Dissolved Metals in Water by CRC ICPMS	E421 Waterloo - Environmental	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D Waterloo - Environmental	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
Dissolved Hardness (Calculated)	EC100 Waterloo - Environmental	Water	APHA 2340B	"Hardness (as CaCO ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 Waterloo - Environmental	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Dissolved Metals Water Filtration	EP421 Waterloo - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO ₃ .
VOCs Preparation for Headspace Analysis	EP581 Waterloo - Environmental	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system.

QUALITY CONTROL REPORT

Work Order	: WT2311786	Page	: 1 of 28
Client	: Bluewater Geoscience Consultants Inc.	Laboratory	: Waterloo - Environmental
Contact	: Breton Lemieux	Account Manager	: Gayle Braun
Address	: 42 Shadyridge Place Kitchener ON Canada N2N 3J1	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	:	Telephone	: +1 519 886 6910
Project	: BG-850	Date Samples Received	: 04-May-2023 13:50
PO	: ----	Date Analysis Commenced	: 04-May-2023
C-O-C number	: ----	Issue Date	: 12-May-2023 16:02
Sampler	: BJL 519 744 4123		
Site	: ----		
Quote number	: SOA		
No. of samples received	: 19		
No. of samples analysed	: 19		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

- Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO = Data Quality Objective.
- LOR = Limit of Reporting (detection limit).
- RPD = Relative Percent Difference
- # = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 923412)											
WT2311786-001	OW-1	Solids, total dissolved [TDS]	----	E162	20	mg/L	373	380	1.86%	20%	----
Physical Tests (QC Lot: 923544)											
WT2311713-001	Anonymous	Turbidity	----	E121	0.10	NTU	<0.10	<0.10	0	Diff <2x LOR	----
Physical Tests (QC Lot: 923545)											
WT2311786-019	OW-20D	Turbidity	----	E121	0.10	NTU	>4000	>4000	0.00%	15%	----
Physical Tests (QC Lot: 923842)											
WT2311786-001	OW-1	Colour, apparent	----	E330	2.0	CU	83.5	79.9	4.38%	20%	----
Physical Tests (QC Lot: 925230)											
WT2311786-001	OW-1	pH	----	E108	0.10	pH units	7.74	7.71	0.388%	4%	----
Physical Tests (QC Lot: 925231)											
WT2311786-001	OW-1	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	374	375	0.502%	20%	----
Physical Tests (QC Lot: 925232)											
WT2311786-001	OW-1	Conductivity	----	E100	1.0	µS/cm	632	638	0.945%	10%	----
Physical Tests (QC Lot: 926821)											
WT2311786-015	OW-13D	pH	----	E108	0.10	pH units	8.15	8.36	2.54%	4%	----
Physical Tests (QC Lot: 926822)											
WT2311786-015	OW-13D	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	476	444	6.94%	20%	----
Physical Tests (QC Lot: 926823)											
WT2311786-015	OW-13D	Conductivity	----	E100	1.0	µS/cm	778	756	2.87%	10%	----
Anions and Nutrients (QC Lot: 925234)											
WT2311759-004	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.177	0.171	0.006	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 925235)											
WT2311759-004	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.040	0.040	0.0010	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 925236)											
WT2311759-004	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 925237)											
WT2311759-004	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	5.23	5.20	0.585%	20%	----
Anions and Nutrients (QC Lot: 925238)											
WT2311759-004	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	3.99	3.97	0.02	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 925239)											



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Anions and Nutrients (QC Lot: 925239) - continued											
WT2311759-004	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 926466)											
WT2311786-001	OW-1	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 926679)											
WT2311786-015	OW-13D	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 926824)											
WT2311891-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	1.63	1.53	0.10	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 926825)											
WT2311891-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	1.78	1.74	2.28%	20%	----
Anions and Nutrients (QC Lot: 926826)											
WT2311891-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 926827)											
WT2311891-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 926828)											
WT2311891-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	75.8	73.3	3.34%	20%	----
Dissolved Metals (QC Lot: 923061)											
WT2311724-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0100	mg/L	0.0346	0.0348	0.0001	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00100	mg/L	<1.00 µg/L	<0.00100	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00100	mg/L	<1.00 µg/L	<0.00100	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00100	mg/L	75.2 µg/L	0.0753	0.0707%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000200	mg/L	<0.200 µg/L	<0.000200	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.100	mg/L	176 µg/L	0.160	0.016	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000500	mg/L	0.0649 µg/L	0.0000703	0.0000054	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.500	mg/L	174	168	3.69%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00500	mg/L	<5.00 µg/L	<0.00500	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00100	mg/L	<1.00 µg/L	<0.00100	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00200	mg/L	2.07 µg/L	0.00218	0.00010	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000500	mg/L	1.48 µg/L	0.00147	0.000010	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0100	mg/L	<0.0100	<0.0100	0	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0500	mg/L	24.6	25.0	1.80%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00100	mg/L	0.203	0.203	0.254%	20%	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 923061) - continued											
WT2311724-001	Anonymous	Molybdenum, dissolved	7439-98-7	E421	0.000500	mg/L	0.920 µg/L	0.000985	0.000066	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00500	mg/L	<5.00 µg/L	<0.00500	0	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.500	mg/L	<0.500	<0.500	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.500	mg/L	6.78	6.73	0.706%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00200	mg/L	<0.00200	<0.00200	0	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000500	mg/L	<0.500 µg/L	<0.000500	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.500	mg/L	5.09	5.08	0.106%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000100	mg/L	<0.100 µg/L	<0.000100	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.500	mg/L	417000 µg/L	410	1.75%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00200	mg/L	0.818	0.844	3.04%	20%	----
		Sulfur, dissolved	7704-34-9	E421	5.00	mg/L	67.2	67.2	0.0563%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00200	mg/L	<0.00200	<0.00200	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000100	mg/L	<0.100 µg/L	<0.000100	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00300	mg/L	<0.00300	<0.00300	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000100	mg/L	1.32 µg/L	0.00128	3.45%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00500	mg/L	<5.00 µg/L	<0.00500	0	Diff <2x LOR	----
Zinc, dissolved	7440-66-6	E421	0.0100	mg/L	14.3 µg/L	0.0148	0.0005	Diff <2x LOR	----		
Zirconium, dissolved	7440-67-7	E421	0.00200	mg/L	<0.00200	<0.00200	0	Diff <2x LOR	----		
Dissolved Metals (QC Lot: 923241)											
WT2311780-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.124	0.128	2.84%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0171	0.0170	0.439%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.023	0.023	0.0002	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000085	0.0000069	0.0000016	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	2.26	2.31	2.24%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	0.00086	0.00088	0.00002	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00026	0.00025	0.000003	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 923241) - continued											
WT2311780-001	Anonymous	Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00085	0.00086	0.000002	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.144	0.145	0.594%	20%	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000116	0.000112	0.000005	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	0.584	0.590	1.12%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00437	0.00426	2.56%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000067	0.000053	0.000014	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00065	0.00064	0.000004	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	1.25	1.24	0.298%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00146	0.00149	0.00003	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	0.000055	0.000005	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.55	3.55	0.113%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	4.26	4.28	0.295%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0286	0.0270	6.06%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	1.74	1.79	0.05	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	0.00019	0.00020	0.000008	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00860	0.00818	5.04%	20%	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000027	0.000026	0.000001	Diff <2x LOR	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0013	0.0012	0.00003	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 926495)											
WT2311758-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----



Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 926495) - continued											
WT2311758-001	Anonymous	Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	4.42	4.22	4.63%	30%	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	0.61	0.53	0.08	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----



Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Volatile Organic Compounds (QC Lot: 928420)											
WT2311745-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: **Water**

Laboratory Duplicate (DUP) Report

<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Original Result</i>	<i>Duplicate Result</i>	<i>RPD(%) or Difference</i>	<i>Duplicate Limits</i>	<i>Qualifier</i>
Volatile Organic Compounds (QC Lot: 928420) - continued											
WT2311745-001	Anonymous	Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 923412)						
Solids, total dissolved [TDS]	---	E162	10	mg/L	<10	---
Physical Tests (QCLot: 923544)						
Turbidity	---	E121	0.1	NTU	<0.10	---
Physical Tests (QCLot: 923545)						
Turbidity	---	E121	0.1	NTU	<0.10	---
Physical Tests (QCLot: 923842)						
Colour, apparent	---	E330	2	CU	<2.0	---
Physical Tests (QCLot: 925231)						
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	<1.0	---
Physical Tests (QCLot: 925232)						
Conductivity	---	E100	1	µS/cm	<1.0	---
Physical Tests (QCLot: 926822)						
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	# 2.8	B
Physical Tests (QCLot: 926823)						
Conductivity	---	E100	1	µS/cm	1.1	---
Anions and Nutrients (QCLot: 925234)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	---
Anions and Nutrients (QCLot: 925235)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	---
Anions and Nutrients (QCLot: 925236)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	---
Anions and Nutrients (QCLot: 925237)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	---
Anions and Nutrients (QCLot: 925238)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	---
Anions and Nutrients (QCLot: 925239)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	---
Anions and Nutrients (QCLot: 926466)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	---
Anions and Nutrients (QCLot: 926679)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	---
Anions and Nutrients (QCLot: 926824)						



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients (QCLot: 926824) - continued						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	---
Anions and Nutrients (QCLot: 926825)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	---
Anions and Nutrients (QCLot: 926826)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	---
Anions and Nutrients (QCLot: 926827)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	---
Anions and Nutrients (QCLot: 926828)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	---
Dissolved Metals (QCLot: 923061)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	---
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	---
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	---
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	---
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	---
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	---
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	---
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	---
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	---
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	---
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	---
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	---
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	---
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	---
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	---
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	---
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	---
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	---
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	---
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	---
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	---
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	---
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	---
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	---
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	---



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 923061) - continued						
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 923241)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 923241) - continued						
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Volatile Organic Compounds (QCLot: 926495)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 926495) - continued						
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	# 1.6	B
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Volatile Organic Compounds (QCLot: 928420)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 928420) - continued						
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----

Qualifiers

Qualifier Description

B Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.

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Work Order : WT2311786
Client : Bluewater Geoscience Consultants Inc.
Project : BG-850





Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Physical Tests (QCLot: 923412)									
Solids, total dissolved [TDS]	---	E162	10	mg/L	1000 mg/L	89.3	85.0	115	---
Physical Tests (QCLot: 923544)									
Turbidity	---	E121	0.1	NTU	200 NTU	96.0	85.0	115	---
Physical Tests (QCLot: 923545)									
Turbidity	---	E121	0.1	NTU	200 NTU	96.0	85.0	115	---
Physical Tests (QCLot: 923842)									
Colour, apparent	---	E330	2	CU	25 CU	107	70.0	130	---
Physical Tests (QCLot: 925230)									
pH	---	E108	---	pH units	7 pH units	101	98.0	102	---
Physical Tests (QCLot: 925231)									
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	150 mg/L	105	85.0	115	---
Physical Tests (QCLot: 925232)									
Conductivity	---	E100	1	µS/cm	1409 µS/cm	102	90.0	110	---
Physical Tests (QCLot: 926821)									
pH	---	E108	---	pH units	7 pH units	101	98.0	102	---
Physical Tests (QCLot: 926822)									
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	150 mg/L	109	85.0	115	---
Physical Tests (QCLot: 926823)									
Conductivity	---	E100	1	µS/cm	1409 µS/cm	97.8	90.0	110	---
Anions and Nutrients (QCLot: 925234)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	102	90.0	110	---
Anions and Nutrients (QCLot: 925235)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	101	90.0	110	---
Anions and Nutrients (QCLot: 925236)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	98.5	90.0	110	---
Anions and Nutrients (QCLot: 925237)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	104	90.0	110	---
Anions and Nutrients (QCLot: 925238)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	102	90.0	110	---
Anions and Nutrients (QCLot: 925239)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.0212 mg/L	107	80.0	120	---



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Anions and Nutrients (QCLot: 926466)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	96.3	85.0	115	----
Anions and Nutrients (QCLot: 926679)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.0212 mg/L	107	80.0	120	----
Anions and Nutrients (QCLot: 926824)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.9	90.0	110	----
Anions and Nutrients (QCLot: 926825)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 926826)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	99.7	90.0	110	----
Anions and Nutrients (QCLot: 926827)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	98.6	90.0	110	----
Anions and Nutrients (QCLot: 926828)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Dissolved Metals (QCLot: 923061)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	97.5	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	105	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	107	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.0125 mg/L	104	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	95.6	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	104	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	90.0	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	97.6	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	98.8	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.0025 mg/L	103	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.0125 mg/L	98.6	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.0125 mg/L	98.6	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.0125 mg/L	96.1	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	94.7	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	105	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.0125 mg/L	92.6	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	110	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.0125 mg/L	102	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.0125 mg/L	98.2	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	96.2	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	95.0	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 923061) - continued									
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	99.0	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	107	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	92.2	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	101	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	89.1	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	102	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.0125 mg/L	97.4	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	93.3	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	95.8	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	104	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	101	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	97.4	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.0125 mg/L	101	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	103	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.00025 mg/L	107	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	102	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	98.4	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	96.9	80.0	120	----
Dissolved Metals (QCLot: 923241)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	98.1	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	104	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	105	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.0125 mg/L	101	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	102	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	98.4	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	95.1	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	101	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	98.8	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.0025 mg/L	100	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.0125 mg/L	99.4	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.0125 mg/L	99.4	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.0125 mg/L	99.2	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	99.0	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	99.7	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.0125 mg/L	97.2	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	114	80.0	120	----



Sub-Matrix: **Water**

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Dissolved Metals (QCLot: 923241) - continued									
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.0125 mg/L	99.0	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.0125 mg/L	101	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	99.3	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	103	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	97.0	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	98.8	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	99.5	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	99.6	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	92.7	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	104	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.0125 mg/L	103	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	97.7	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	99.0	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	103	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	99.3	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	101	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.0125 mg/L	97.0	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	96.9	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.00025 mg/L	102	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	101	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	99.7	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	99.9	80.0	120	----
Volatile Organic Compounds (QCLot: 926495)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	127	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	110	60.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	109	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	102	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----



Sub-Matrix: Water

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
Volatile Organic Compounds (QCLot: 926495) - continued									
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	92.0	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	111	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	102	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	99.0	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	115	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	97.0	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	108	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	103	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	103	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	102	70.0	130	----
Volatile Organic Compounds (QCLot: 928420)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	102	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	91.8	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	126	60.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	113	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	98.0	70.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 928420) - continued									
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	91.2	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	93.5	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	96.0	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	96.8	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	98.2	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	# 142	60.0	140	MES
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	112	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	113	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	104	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	106	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	128	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	108	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	87.4	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	94.4	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	97.2	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	97.1	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	114	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	97.4	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	99.8	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	121	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	122	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	100	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	96.1	70.0	130	----



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 925234)										
WT2311759-004	Anonymous	Fluoride	16984-48-8	E235.F	0.985 mg/L	1 mg/L	98.5	75.0	125	----
Anions and Nutrients (QCLot: 925235)										
WT2311759-004	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.27 mg/L	2.5 mg/L	90.9	75.0	125	----
Anions and Nutrients (QCLot: 925236)										
WT2311759-004	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.479 mg/L	0.5 mg/L	95.9	75.0	125	----
Anions and Nutrients (QCLot: 925237)										
WT2311759-004	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	94.5 mg/L	100 mg/L	94.5	75.0	125	----
Anions and Nutrients (QCLot: 925238)										
WT2311759-004	Anonymous	Chloride	16887-00-6	E235.Cl	96.5 mg/L	100 mg/L	96.5	75.0	125	----
Anions and Nutrients (QCLot: 925239)										
WT2311759-004	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0193 mg/L	0.0196 mg/L	98.7	70.0	130	----
Anions and Nutrients (QCLot: 926466)										
WT2311786-001	OW-1	Ammonia, total (as N)	7664-41-7	E298	0.104 mg/L	0.1 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 926679)										
WT2311786-015	OW-13D	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0162 mg/L	0.0196 mg/L	82.6	70.0	130	----
Anions and Nutrients (QCLot: 926824)										
WT2311891-001	Anonymous	Chloride	16887-00-6	E235.Cl	100 mg/L	100 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 926825)										
WT2311891-001	Anonymous	Fluoride	16984-48-8	E235.F	ND mg/L	1 mg/L	ND	75.0	125	----
Anions and Nutrients (QCLot: 926826)										
WT2311891-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.40 mg/L	2.5 mg/L	96.0	75.0	125	----
Anions and Nutrients (QCLot: 926827)										
WT2311891-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.486 mg/L	0.5 mg/L	97.3	75.0	125	----
Anions and Nutrients (QCLot: 926828)										
WT2311891-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	96.6 mg/L	100 mg/L	96.6	75.0	125	----
Dissolved Metals (QCLot: 923061)										
WT2311724-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.983 mg/L	1 mg/L	98.3	70.0	130	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 923061) - continued										
WT2311724-002	Anonymous	Antimony, dissolved	7440-36-0	E421	0.519 mg/L	0.5 mg/L	104	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.565 mg/L	0.5 mg/L	113	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.130 mg/L	0.125 mg/L	104	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0472 mg/L	0.05 mg/L	94.4	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.482 mg/L	0.5 mg/L	96.3	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.412 mg/L	0.5 mg/L	82.5	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.0479 mg/L	0.05 mg/L	95.7	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	25 mg/L	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0258 mg/L	0.025 mg/L	103	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.122 mg/L	0.125 mg/L	97.8	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.122 mg/L	0.125 mg/L	97.7	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.118 mg/L	0.125 mg/L	94.7	70.0	130	----
		Iron, dissolved	7439-89-6	E421	0.469 mg/L	0.5 mg/L	93.8	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.241 mg/L	0.25 mg/L	96.4	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.116 mg/L	0.125 mg/L	92.8	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	27.4 mg/L	25 mg/L	110	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	0.125 mg/L	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.125 mg/L	0.125 mg/L	100	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.240 mg/L	0.25 mg/L	96.0	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	5.50 mg/L	5 mg/L	110	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	25.7 mg/L	25 mg/L	103	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0535 mg/L	0.05 mg/L	107	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.486 mg/L	0.5 mg/L	97.2	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	4.81 mg/L	5 mg/L	96.2	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.0435 mg/L	0.05 mg/L	87.1	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	25 mg/L	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	0.125 mg/L	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	25 mg/L	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0501 mg/L	0.05 mg/L	100	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.487 mg/L	0.5 mg/L	97.4	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0474 mg/L	0.05 mg/L	94.7	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.243 mg/L	0.25 mg/L	97.1	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.130 mg/L	0.125 mg/L	104	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0507 mg/L	0.05 mg/L	101	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	0.0025 mg/L	ND	70.0	130	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 923061) - continued										
WT2311724-002	Anonymous	Vanadium, dissolved	7440-62-2	E421	0.263 mg/L	0.25 mg/L	105	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.246 mg/L	0.25 mg/L	98.5	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0494 mg/L	0.05 mg/L	98.8	70.0	130	----
Dissolved Metals (QCLot: 923241)										
WT2311780-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.892 mg/L	1 mg/L	89.2	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.482 mg/L	0.5 mg/L	96.4	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.492 mg/L	0.5 mg/L	98.4	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	0.125 mg/L	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0451 mg/L	0.05 mg/L	90.2	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.450 mg/L	0.5 mg/L	89.9	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	0.5 mg/L	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.0458 mg/L	0.05 mg/L	91.6	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	25 mg/L	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0232 mg/L	0.025 mg/L	92.7	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.113 mg/L	0.125 mg/L	90.5	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.114 mg/L	0.125 mg/L	91.5	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.113 mg/L	0.125 mg/L	90.3	70.0	130	----
		Iron, dissolved	7439-89-6	E421	0.448 mg/L	0.5 mg/L	89.7	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.237 mg/L	0.25 mg/L	94.7	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.110 mg/L	0.125 mg/L	87.8	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	25 mg/L	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	0.125 mg/L	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.115 mg/L	0.125 mg/L	92.1	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.228 mg/L	0.25 mg/L	91.2	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	4.69 mg/L	5 mg/L	93.8	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	25 mg/L	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0459 mg/L	0.05 mg/L	91.7	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.470 mg/L	0.5 mg/L	94.0	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	5 mg/L	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.0310 mg/L	0.05 mg/L	62.1	70.0	130	MES
		Sodium, dissolved	7440-23-5	E421	ND mg/L	25 mg/L	ND	70.0	130	----
Strontium, dissolved	7440-24-6	E421	ND mg/L	0.125 mg/L	ND	70.0	130	----		
Sulfur, dissolved	7704-34-9	E421	22.7 mg/L	25 mg/L	91.0	70.0	130	----		
Tellurium, dissolved	13494-80-9	E421	0.0480 mg/L	0.05 mg/L	96.0	70.0	130	----		
Thallium, dissolved	7440-28-0	E421	0.476 mg/L	0.5 mg/L	95.3	70.0	130	----		



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 923241) - continued										
WT2311780-002	Anonymous	Thorium, dissolved	7440-29-1	E421	0.0464 mg/L	0.05 mg/L	92.9	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.229 mg/L	0.25 mg/L	91.7	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.117 mg/L	0.125 mg/L	93.5	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0462 mg/L	0.05 mg/L	92.3	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	0.0025 mg/L	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.237 mg/L	0.25 mg/L	94.7	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.235 mg/L	0.25 mg/L	94.1	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0457 mg/L	0.05 mg/L	91.4	70.0	130	----
Volatile Organic Compounds (QCLot: 926495)										
WT2311758-001	Anonymous	Acetone	67-64-1	E611D	132 µg/L	100 µg/L	132	60.0	140	----
		Benzene	71-43-2	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Bromoform	75-25-2	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		Bromomethane	74-83-9	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Chlorobenzene	108-90-7	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Chloroform	67-66-3	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	99.1 µg/L	100 µg/L	99.1	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	75.4 µg/L	100 µg/L	75.4	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	113 µg/L	100 µg/L	113	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	96.5 µg/L	100 µg/L	96.5	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloromethane	75-09-2	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	99.8 µg/L	100 µg/L	99.8	60.0	140	----
		Ethylbenzene	100-41-4	E611D	95.1 µg/L	100 µg/L	95.1	60.0	140	----
		Hexane, n-	110-54-3	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	123 µg/L	100 µg/L	123	60.0	140	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 926495) - continued										
WT2311758-001	Anonymous	Methyl isobutyl ketone [MIBK]	108-10-1	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Styrene	100-42-5	E611D	97.9 µg/L	100 µg/L	97.9	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	99.3 µg/L	100 µg/L	99.3	60.0	140	----
		Toluene	108-88-3	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Trichloroethylene	79-01-6	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Vinyl chloride	75-01-4	E611D	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	196 µg/L	200 µg/L	98.1	60.0	140	----
Xylene, o-	95-47-6	E611D	98.2 µg/L	100 µg/L	98.2	60.0	140	----		
Volatile Organic Compounds (QCLot: 928420)										
WT2311745-001	Anonymous	Acetone	67-64-1	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Benzene	71-43-2	E611D	99.7 µg/L	100 µg/L	99.7	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	98.8 µg/L	100 µg/L	98.8	60.0	140	----
		Bromoform	75-25-2	E611D	94.7 µg/L	100 µg/L	94.7	60.0	140	----
		Bromomethane	74-83-9	E611D	117 µg/L	100 µg/L	117	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Chlorobenzene	108-90-7	E611D	95.1 µg/L	100 µg/L	95.1	60.0	140	----
		Chloroform	67-66-3	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	92.4 µg/L	100 µg/L	92.4	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	98.1 µg/L	100 µg/L	98.1	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	94.3 µg/L	100 µg/L	94.3	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	92.7 µg/L	100 µg/L	92.7	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	94.7 µg/L	100 µg/L	94.7	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	97.4 µg/L	100 µg/L	97.4	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloromethane	75-09-2	E611D	108 µg/L	100 µg/L	108	60.0	140	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 928420) - continued										
WT2311745-001	Anonymous	Dichloropropane, 1,2-	78-87-5	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		Ethylbenzene	100-41-4	E611D	97.8 µg/L	100 µg/L	97.8	60.0	140	----
		Hexane, n-	110-54-3	E611D	112 µg/L	100 µg/L	112	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	120 µg/L	100 µg/L	120	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	95 µg/L	100 µg/L	95.5	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Styrene	100-42-5	E611D	99.5 µg/L	100 µg/L	99.5	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	92.0 µg/L	100 µg/L	92.0	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	89.5 µg/L	100 µg/L	89.5	60.0	140	----
		Toluene	108-88-3	E611D	90.8 µg/L	100 µg/L	90.8	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Trichloroethylene	79-01-6	E611D	92.9 µg/L	100 µg/L	92.9	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Vinyl chloride	75-01-4	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	188 µg/L	200 µg/L	93.8	60.0	140	----
		Xylene, o-	95-47-6	E611D	90.7 µg/L	100 µg/L	90.7	60.0	140	----

Qualifiers

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).



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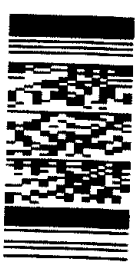
Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20-207212

Page 1

Environmental Division
Waterloo
Work Order Reference
WT2311786



Telephone: +1 519 886 6910

Client and company name below will appear on the final report

Company: **Bluewater Geoscience**
 Contact: **B. LEMIBEK**

Province: **ON**
 City: **MISSISSAUGA**

Project Information:
 S Account # / Quote #: **BG-050**

ALS Lab Work Order # (ALS use only): **WT2311786**

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	ALS Contact:	Date (dd-mm-yy)	Sampler:	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS
1	DW-1	GAYLE	04/05/23	BLL		GD	0 Voc Gen Chem. Plus 1
2	DW-2S						
3	DW-2D						
4	DW-3S						
5	DW-3D						
6	DW-3						
7	DW-7S						
8	DW-7D						
9	DW-8						
10	DW-10S						
11	DW-10D						
12	DW-12S						

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Shipping Water (DW) Samples (client use)
 Are samples taken from a Regulated DW System? YES NO

Are samples for human consumption/ use? YES NO

Released by: **BLL** Date: **MAY 4/23** Time: **11:50**

Initial Shipment Reception (ALS use only)
 Received by: **AG** Date: **MAY 4/23** Time: **11:50**

White - Laboratory Copy
 Yellow - Client Copy

Final Shipment Reception (ALS use only)
 Received by: **AB** Date: **MAY 4/23** Time: **11:50**

Shipping Release (client use)
 Released by: **BLL** Date: **MAY 4/23** Time: **11:50**

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.
 1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20-887814

Page 2 of 2

Report To Contact and company name below will appear on the final report Company: <u>Bluewater Geoscience</u> Contact: <u>P. Lemieux</u> Phone: _____ Company address below will appear on the final report		Reports / Recipients Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Merge QC/QCI Reports with COA <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax _____ Email 2 _____ Email 3 _____	
Street _____ City/Province: _____ Postal Code: _____		Invoice To Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Company: _____ Contact: _____	
ALS Account # / Quote # <u>BG-BSD</u>		Project Information A/E/Coast Center: _____ Major/Minor Code: _____ Requisitioner: _____ Location: _____	
ALS Lab Work Order # (ALS use only) <u>20231786</u>		ALS Contact: <u>GAYLE</u>	
ALS Sample # (ALS use only) Sample Identification and/or Coordinates (This description will appear on the report) <u>DW-12D</u> <u>DW-13S</u> <u>DW-13D</u> <u>DW-16S</u> <u>DW-16D</u> <u>DW-20S</u> <u>DW-20D</u>		Date <u>04/05/23</u> Time <u>11:50</u> Sample Type <u>GW</u>	
Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only) <u>DDWS</u>			
Drinking Water (DW) Samples (client use) Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Are samples for human consumption use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Turnaround Time (TAT) Requested <input checked="" type="checkbox"/> Routine (R) if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day (P4) if received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day (P3) if received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day (P2) if received by 3pm M-F - 50% rush surcharge minimum <input type="checkbox"/> 1 day (E) if received by 3pm M-F - 100% rush surcharge minimum <input type="checkbox"/> Same day (E2) if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests	
Released by: <u>BAL</u>		Received by: <u>AG</u>	
Date: <u>May 4 / 23</u>		Date: <u>May 4 / 23</u>	
Time: <u>11:50</u>		Time: <u>11:50</u>	
SHIPMENT RELEASE (client use) REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the write - report copy. 1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.		INITIAL SHIPMENT RECEPTION (ALS use only) WHITE - LABORATORY COPY YELLOW - CLIENT COPY NUMBER OF CONTAINERS <u>6</u> <u>JOC</u> <u>Gen. Chem Pkg. 1</u>	
SAMPLE RECEIPT DETAILS (ALS use only) Cooling Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input checked="" type="checkbox"/> ICEPACKS <input type="checkbox"/> FROZEN Submission Comments identified on Sample Receipt Notification: _____ Cooler Custody Seals Intact: <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A Initial Cooler Temperature: _____ Final Cooler Temperature: _____		INITIAL SHIPMENT RECEPTION (ALS use only) Cooling Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input checked="" type="checkbox"/> ICEPACKS <input type="checkbox"/> FROZEN Submission Comments identified on Sample Receipt Notification: _____ Cooler Custody Seals Intact: <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input checked="" type="checkbox"/> N/A Initial Cooler Temperature: _____ Final Cooler Temperature: _____	



CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p>Work Order : WT2333946</p> <p>Client : Bluewater Geoscience Consultants Inc.</p> <p>Contact : Breton Lemieux</p> <p>Address : 42 Shadyridge Place Kitchener ON Canada N2N 3J1</p> <p>Telephone : 519 744 4123</p> <p>Project : BG-850</p> <p>PO : ----</p> <p>C-O-C number : 20-887776, 20-887777</p> <p>Sampler : BJC</p> <p>Site : ----</p> <p>Quote number : SOA</p> <p>No. of samples received : 17</p> <p>No. of samples analysed : 17</p>	<p>Page : 1 of 53</p> <p>Laboratory : ALS Environmental - Waterloo</p> <p>Account Manager : Gayle Braun</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 19-Oct-2023 13:15</p> <p>Date Analysis Commenced : 19-Oct-2023</p> <p>Issue Date : 27-Oct-2023 17:41</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Metals, Waterloo, Ontario
John Tang	Lab Analyst	Inorganics, Waterloo, Ontario
Jon Fisher	Production Manager, Environmental	Inorganics, Waterloo, Ontario
Jon Fisher	Production Manager, Environmental	Metals, Waterloo, Ontario
Nik Perkio	Inorganics Analyst	Inorganics, Waterloo, Ontario

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
µS/cm	microsiemens per centimetre
CU	colour units (1 cu = 1 mg/l pt)
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units

>: greater than.

<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

Qualifiers

<i>Qualifier</i>	<i>Description</i>
DLDS	<i>Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.</i>
DLHC	<i>Detection Limit Raised: Dilution required due to high concentration of test analyte(s).</i>
DLM	<i>Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).</i>
DLUI	<i>Detection Limit Raised: Unknown interference generated an apparent false positive test result.</i>
RRV	<i>Reported result verified by repeat analysis.</i>
TMV	<i>Turbidity exceeded upper limit of the nephelometric method. Minimum value reported.</i>



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-1	ONDWS AO/OG	ONDWS MAC	--	--	--	--
				Sampling date/time	19-Oct-2023 00:00						
Sub-Matrix: Water (Matrix: Water)				WT2333946-001							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	437		30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	144		5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	744		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	444		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.72		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	382	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	66.0		5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	0.0736		--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	1.99		250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	0.034		--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	0.027		--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.010		--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	0.0130		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	8.31		500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0104		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00055		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.0478		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.081		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	0.0000130		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	111		--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00033		--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00060		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-001 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	0.499	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000089	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0032	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	40.6	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.0612	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000264	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00078	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	1.38	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00062	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000254	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	5.70	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	7.15	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.175	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	10.4	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000011	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	0.00026	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.00102	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0067	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-1	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	144 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	444 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	66.0 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	0.499 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.0612 mg/L	0.05 mg/L

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline (2006)
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID							
				OW-2S	ONDWS	ONDWS	--	--	--	--	
Sub-Matrix: Water (Matrix: Water)				Sampling date/time	19-Oct-2023 00:00	AO/OG	MAC				
				WT2333946-002							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	708	30 - 500 mg/L	--	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	76.7	5 CU	--	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	1150	--	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	680	80 - 100 mg/L	--	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.51	6.5 - 8.5 pH units	--	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	598	DLDS 500 mg/L	--	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	35.2	5 NTU	--	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	0.0130	--	--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	<2.50	DLDS 250 mg/L	--	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	<0.100	DLDS --	1.5 mg/L	--	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	<0.100	DLDS --	10 mg/L	--	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.050	DLDS --	1 mg/L	--	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	0.0015	--	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	13.5	DLDS 500 mg/L	--	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0032	0.1 mg/L	--	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00127	--	0.01 mg/L	--	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.0656	--	1 mg/L	--	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020	--	--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050	--	--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.388	--	5 mg/L	--	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	<0.0000050	--	0.005 mg/L	--	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	151	--	--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00073	--	--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	<0.00020	1 mg/L	--	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-002 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	0.768	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000233	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0103	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	73.6	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.158	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000254	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00233	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	2.51	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00095	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	<0.000500	DLM	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	9.66	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000100	DLM	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	11.0	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.227	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	11.5	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000047	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	0.00055	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.000723	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0021	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-2S	Water	Alkalinity, total (as CaCO ₃)		ONDWS	AO/OG	708 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	76.7 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	680 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	598 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	35.2 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	0.768 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.158 mg/L	0.05 mg/L

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline (2006)
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID						
				OW-2D	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Sub-Matrix: Water (Matrix: Water)				Client sample ID						
Sampling date/time				19-Oct-2023 00:00						
				WT2333946-003						
Physical Tests										
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	640	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	56.2	5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	1380	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	699	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.49	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	792 DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	27.4	5 NTU	--	--	--	--	--
Anions and Nutrients										
Ammonia, total (as N)	E298/WT	0.0050	mg/L	6.64 DLHC	--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	30.2 DLDS	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	<0.100 DLDS	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	<0.100 DLDS	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.050 DLDS	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	150 DLDS	500 mg/L	--	--	--	--	--
Dissolved Metals										
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0040	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00270	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.136	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.612	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	<0.0000050	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	137	--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00391	--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00080	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-003 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	2.70	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.00110	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0048	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	86.7	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.800	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000690	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.0111	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	13.7	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00303	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000142	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	7.68	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	30.7	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.349	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	52.6	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000229	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.00141	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0071	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00051	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-2D	Water	Alkalinity, total (as CaCO ₃)		ONDWS	AO/OG	640 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	56.2 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	699 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	792 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	27.4 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	2.70 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.800 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	30.7 mg/L	20 mg/L

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline (2006)
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-3S	ONDWS AO/OG	ONDWS MAC	--	--	--	--
				Sub-Matrix: Water (Matrix: Water)	Sampling date/time						
				WT2333946-004							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	401		30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	566	DLHC	5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	634		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	379		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.66		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	318	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	224		5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	0.0450		--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	<0.50		250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	0.030		--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	<0.020		--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.010		--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.0010		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	0.52		500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0134		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00222		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.0675		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.099		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	<0.0000050		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	109		--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00117		--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00046		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-004 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	2.66	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000135	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0018	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	25.9	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.381	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000569	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00130	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	3.30	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00113	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000174	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	4.18	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	7.22	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.220	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	1.51	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	0.00054	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	0.00016	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.000486	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0026	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00026	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-3S	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	566 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	379 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	224 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	2.66 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.381 mg/L	0.05 mg/L

Key:
 ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline (2006)
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID						
				OW-3D	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
				19-Oct-2023 00:00						
				WT2333946-005						
Physical Tests										
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	820	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	602 DLHC	5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	1800	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	727	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	6.87	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	932 DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	197	5 NTU	--	--	--	--	--
Anions and Nutrients										
Ammonia, total (as N)	E298/WT	0.0050	mg/L	37.7 DLHC	--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	54.4 DLDS	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	<0.100 DLDS	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	<0.100 DLDS	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.050 DLDS	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.100 DLM	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	20.9 DLDS	500 mg/L	--	--	--	--	--
Dissolved Metals										
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0155	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00551	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.433	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.832	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	<0.0000050	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	188	--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	0.00098	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00079	--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00070	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-005 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	17.0	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000123	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0020	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	62.6	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.648	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000159	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00350	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	26.7	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00614	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000697	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	7.93	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	52.5	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.670	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	9.67	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	0.00068	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.000250	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	0.00113	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0030	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00228	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-3D	Water	Alkalinity, total (as CaCO ₃)		ONDWS	AO/OG	820 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	602 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	727 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	932 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	197 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	17.0 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.648 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	52.5 mg/L	20 mg/L

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline (2006)
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-7S	ONDWS AO/OG	ONDWS MAC	--	--	--	--
				Sub-Matrix: Water (Matrix: Water)	Sampling date/time						
				WT2333946-006							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	625		30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	4550	DLHC DLM	5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	1260		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	688		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.07		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	832	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	2500		5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	0.0675		--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	32.0	DLDS	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	<0.100	DLDS	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	<0.100	DLDS	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.050	DLDS	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.0010		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	140	DLDS	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0031		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	0.00012		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00080		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.109		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.298		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	0.0000677		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	183		--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00071		--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00322		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-006 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	0.541	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000180	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0024	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	56.1	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.200	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000557	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00332	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	6.39	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00151	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000262	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	5.72	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	20.6	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.315	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	50.0	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000074	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.00380	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0388	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00087	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-7S	Water	Alkalinity, total (as CaCO ₃)		ONDWS	AO/OG	625 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	4550 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	688 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	832 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	2500 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	0.541 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.200 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	20.6 mg/L	20 mg/L

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline (2006)
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID							
				OW-7D	ONDWS	ONDWS	--	--	--	--	
Sub-Matrix: Water (Matrix: Water)				Sampling date/time	19-Oct-2023 00:00	AO/OG	MAC				
				WT2333946-007							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	625	30 - 500 mg/L	--	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	63.4	5 CU	--	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	1350	--	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	668	80 - 100 mg/L	--	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.56	6.5 - 8.5 pH units	--	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	796	DLDS 500 mg/L	--	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	23.8	5 NTU	--	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	8.16	DLHC --	--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	38.8	DLDS 250 mg/L	--	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	<0.100	DLDS --	1.5 mg/L	--	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	3.27	DLDS --	10 mg/L	--	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.050	DLDS --	1 mg/L	--	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	111	DLDS 500 mg/L	--	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0067	0.1 mg/L	--	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	0.00010	--	0.006 mg/L	--	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00170	--	0.01 mg/L	--	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.132	--	1 mg/L	--	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020	--	--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050	--	--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.635	--	5 mg/L	--	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	0.0000142	--	0.005 mg/L	--	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	139	--	--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00193	--	--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00112	1 mg/L	--	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-007 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	1.83	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000982	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0042	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	77.9	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.172	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000479	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00843	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	26.7	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00797	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000096	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	6.70	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	31.8	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.448	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	43.1	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000504	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.000694	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0597	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00037	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-7D	Water	Alkalinity, total (as CaCO ₃)		ONDWS	AO/OG	625 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	63.4 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	668 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	796 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	23.8 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	1.83 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.172 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	31.8 mg/L	20 mg/L

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline (2006)
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-B	ONDWS AO/OG	ONDWS MAC	--	--	--	--
				Sampling date/time	19-Oct-2023 00:00						
Sub-Matrix: Water (Matrix: Water)				WT2333946-008							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	485		30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	563	DLHC	5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	1650		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	1010		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.65		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	1290	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	199		5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	<0.0050		--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	11.7	DLDS	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	<0.100	DLDS	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	1.23	DLDS	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.050	DLDS	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	0.0056		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	562	DLDS	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E423A/WT	0.0030	mg/L	0.0057		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E423A/WT	0.00010	mg/L	0.00011		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E423A/WT	0.00010	mg/L	0.00028		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E423A/WT	0.00010	mg/L	0.0328		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E423A/WT	0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E423A/WT	0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E423A/WT	0.010	mg/L	0.651		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E423A/WT	0.0000050	mg/L	0.0000306		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E423A/WT	0.050	mg/L	238		--	--	--	--	--	--
Cesium, dissolved	E423A/WT	0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E423A/WT	0.00010	mg/L	0.00023		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E423A/WT	0.00010	mg/L	<0.00010		--	--	--	--	--	--
Copper, dissolved	E423A/WT	0.00050	mg/L	0.00305		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-008 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E423A/WT	0.010	mg/L	0.021	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E423A/WT	0.000050	mg/L	<0.000050	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E423A/WT	0.0010	mg/L	0.0013	--	--	--	--	--	--
Magnesium, dissolved	E423A/WT	0.0050	mg/L	102 DLHC	--	--	--	--	--	--
Manganese, dissolved	E423A/WT	0.00010	mg/L	0.00451	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E423A/WT	0.000050	mg/L	0.000329	--	--	--	--	--	--
Nickel, dissolved	E423A/WT	0.00050	mg/L	0.00079	--	--	--	--	--	--
Phosphorus, dissolved	E423A/WT	0.050	mg/L	0.106	--	--	--	--	--	--
Potassium, dissolved	E423A/WT	0.050	mg/L	7.72	--	--	--	--	--	--
Rubidium, dissolved	E423A/WT	0.00020	mg/L	0.00068	--	--	--	--	--	--
Selenium, dissolved	E423A/WT	0.000050	mg/L	0.000146	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E423A/WT	0.10	mg/L	4.57	--	--	--	--	--	--
Silver, dissolved	E423A/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E423A/WT	0.050	mg/L	15.2	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E423A/WT	0.00020	mg/L	0.448	--	--	--	--	--	--
Sulfur, dissolved	E423A/WT	0.50	mg/L	206	--	--	--	--	--	--
Tellurium, dissolved	E423A/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E423A/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Thorium, dissolved	E423A/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E423A/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E423A/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E423A/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E423A/WT	0.000010	mg/L	0.000909	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E423A/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E423A/WT	0.0030	mg/L	0.0080	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E423A/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP423/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-B	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	563 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	1010 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	1290 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	199 NTU	5 NTU
	Water	Sulfate (as SO4)	High levels (above 500 mg/L) can cause physiological effects such as diarrhoea or dehydration. Based on taste; it is recommended that health authorities be notified of drinking water sources containing sulphate concentrations above 500 mg/L.	ONDWS	AO/OG	562 mg/L	500 mg/L

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline (2006)
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-10S	ONDWS AO/OG	ONDWS MAC	--	--	--	--
				Sampling date/time	19-Oct-2023 00:00						
Sub-Matrix: Water (Matrix: Water)				WT2333946-009							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	453		30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	909	DLHC	5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	749		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	443		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.69		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	456	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	494		5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	0.537	DLHC	--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	10.4		250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	0.053		--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	0.037		--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	0.032		--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.0010		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	13.5		500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0084		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00063		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.0481		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.138		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	0.0000085		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	108		--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00076		--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00062		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-009 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	0.260	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000859	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0017	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	42.2	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.311	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000430	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00352	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	2.04	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00174	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000060	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	4.00	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	11.3	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.154	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	10.5	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000101	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.000742	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0063	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-10S	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	909 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	443 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	494 NTU	5 NTU
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.311 mg/L	0.05 mg/L

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline (2006)
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID							
				OW-10D	19-Oct-2023	00:00	WT2333946-010	ONDWS AO/OG	ONDWS MAC	--	--
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	642	RRV	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	156		5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	1210		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	648		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.70		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	645	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	59.8		5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	10.0	DLHC	--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	32.1	DLDS	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	<0.100	DLDS	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	<0.100	DLDS	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.050	DLDS	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.0010		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	38.7	DLDS	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0023		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00418		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.209		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.483		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	0.0000080		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	148		--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	0.000014		--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00618		--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00056		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-010 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	3.39	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000622	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0037	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	67.7	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	1.19	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000587	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.0159	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	9.13	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00311	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000094	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	6.92	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	30.2	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.320	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	35.3	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000522	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.000971	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0493	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00034	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-10D	Water	Alkalinity, total (as CaCO3)		ONDWS	AO/OG	642 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	156 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	648 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	645 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	59.8 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	3.39 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	1.19 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	30.2 mg/L	20 mg/L

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline (2006)
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID						
				OW-12D	ONDWS	ONDWS	--	--	--	--
Sub-Matrix: Water (Matrix: Water)				Sampling date/time	AO/OG	MAC				
				19-Oct-2023 00:00	WT2333946-011					
Physical Tests										
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	473	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	56.6	5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	888	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	442	80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.82	6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	496	DLDS 500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	10.2	5 NTU	--	--	--	--	--
Anions and Nutrients										
Ammonia, total (as N)	E298/WT	0.0050	mg/L	0.826	DLHC --	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	20.1	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	0.046	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	0.135	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	0.036	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	28.9	500 mg/L	--	--	--	--	--
Dissolved Metals										
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0067	0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00037	--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.0422	--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020	--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050	--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.251	--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	0.0000845	--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	109	--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	0.000014	--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00033	--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00115	1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-011 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	0.033	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000407	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0014	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	41.3	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.350	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000827	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00505	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	2.21	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00206	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000118	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	4.15	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	15.8	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.145	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	11.0	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000269	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	0.00032	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.00685	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0504	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00022	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-12D	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	56.6 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	442 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	10.2 NTU	5 NTU
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.350 mg/L	0.05 mg/L

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline (2006)
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-13S	ONDWS AO/OG	ONDWS MAC	--	--	--	--
				Sub-Matrix: Water (Matrix: Water)	Sampling date/time						
				WT2333946-012							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	405		30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	4870	DLHC DLM	5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	619		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	343		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.67		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	335	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	2040		5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	0.0089		--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	0.94		250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	0.044		--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	<0.020		--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.010		--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	0.0016		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	10.2		500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0198		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00019		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.0137		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	<0.010		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	0.0000142		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	88.9		--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	<0.00010		--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00102		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-012 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	0.031	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000064	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	<0.0010	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	29.5	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.0192	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000174	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	0.216	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00022	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.00165	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	2.79	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	2.54	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.0968	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	4.07	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00070	DLUI	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.000547	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0023	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-13S	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	4870 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	343 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	2040 NTU	5 NTU

Key:

ONDWS Ontario Drinking Water Regulation (JAN, 2020)
 AO/OG Aesthetic Objective/Operational Guideline (2006)
 MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-13D	ONDWS AO/OG	ONDWS MAC	--	--	--	--
				Sub-Matrix: Water (Matrix: Water)	Sampling date/time						
				WT2333946-013							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	537	RRV	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	232		5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	1050		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	501		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.62		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	638	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	91.8		5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	2.71	DLHC	--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	11.5		250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	0.046		--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	0.053		--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	0.072		--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.0010		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	73.9		500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0048		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00171		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.0669		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.159		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	0.0000063		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	129		--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00047		--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00031		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-013 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	2.38	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000406	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0011	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	43.5	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.214	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000785	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00361	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	3.45	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00173	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000104	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	4.86	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	11.2	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.259	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	23.7	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000055	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.00125	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0641	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00045	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-13D	Water	Alkalinity, total (as CaCO ₃)		ONDWS	AO/OG	537 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	232 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	501 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	638 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	91.8 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	2.38 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.214 mg/L	0.05 mg/L

Key:

ONDWS	Ontario Drinking Water Regulation (JAN, 2020)
AO/OG	Aesthetic Objective/Operational Guideline (2006)
MAC	Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-16S	ONDWS AO/OG	ONDWS MAC	--	--	--	--
				Sub-Matrix: Water (Matrix: Water)	Sampling date/time						
				WT2333946-014							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	379		30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	469	DLHC	5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	599		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	360		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.80		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	352	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	420		5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	0.0099		--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	8.34		250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	0.056		--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	<0.020		--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.010		--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	0.0016		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	4.03		500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0105		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00049		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.0339		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.050		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	<0.0000050		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	95.9		--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00024		--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00060		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-014 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	0.219	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000156	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0021	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	29.3	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.0481	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000598	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00084	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	2.43	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00111	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	<0.000050	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	6.47	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	3.98	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.149	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	4.33	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000021	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.000842	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0017	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-16S	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	469 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	360 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	420 NTU	5 NTU

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline (2006)
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID						
				OW-16D	19-Oct-2023	00:00	WT2333946-015	ONDWS AO/OG	ONDWS MAC	--
Sub-Matrix: Water (Matrix: Water)										
Sampling date/time										
Physical Tests										
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	675	RRV	30 - 500 mg/L	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	249	DLHC	5 CU	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	1360		--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	673		80 - 100 mg/L	--	--	--	--
pH	E108/WT	0.10	pH units	7.90		6.5 - 8.5 pH units	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	787	DLDS	500 mg/L	--	--	--	--
Turbidity	E121/WT	0.10	NTU	73.6		5 NTU	--	--	--	--
Anions and Nutrients										
Ammonia, total (as N)	E298/WT	0.0050	mg/L	14.9	DLHC	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	23.3	DLDS	250 mg/L	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	<0.100	DLDS	--	1.5 mg/L	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	<0.100	DLDS	--	10 mg/L	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.050	DLDS	--	1 mg/L	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.0010		--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	113	DLDS	500 mg/L	--	--	--	--
Dissolved Metals										
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0034		0.1 mg/L	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00248		--	0.01 mg/L	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.181		--	1 mg/L	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020		--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050		--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.584		--	5 mg/L	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	0.0000230		--	0.005 mg/L	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	149		--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	0.000016		--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00223		--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00106		1 mg/L	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-015 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	5.06	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.00230	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0046	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	73.2	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.495	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000346	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00529	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	23.6	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00884	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000091	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	6.77	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	24.6	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.458	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	42.3	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000202	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	0.00015	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.000474	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0139	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00078	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-16D	Water	Alkalinity, total (as CaCO ₃)		ONDWS	AO/OG	675 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	249 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	673 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	787 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	73.6 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	5.06 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.495 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	24.6 mg/L	20 mg/L

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline (2006)
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-20S	ONDWS AO/OG	ONDWS MAC	--	--	--	--
				Sampling date/time	19-Oct-2023 00:00						
				WT2333946-016							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	362		30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	15300	DLHC DLM	5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	681		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	379		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	8.16		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	413	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	>4000	TMV	5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	0.130		--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	8.63		250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	0.192		--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	<0.020		--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.010		--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.0010		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	31.4		500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0587		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00356		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.0525		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.130		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	<0.0000050		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	78.4		--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00055		--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00037		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-016 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	1.20	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000303	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0067	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	44.4	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.138	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.00158	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00135	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	3.56	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00145	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	<0.000050	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	8.00	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	21.7	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.240	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	17.5	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000054	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	0.00239	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	0.00015	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.00168	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0031	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-20S	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	15300 CU	5 CU
	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	379 mg/L	80-100 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	>4000	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	1.20 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.138 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	21.7 mg/L	20 mg/L

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline (2006)
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



Analytical Results

Analyte	Method/Lab	LOR	Unit	Client sample ID	OW-20D	ONDWS AO/OG	ONDWS MAC	--	--	--	--
				Sampling date/time	19-Oct-2023 00:00						
Sub-Matrix: Water (Matrix: Water)				WT2333946-017							
Physical Tests											
Alkalinity, total (as CaCO3)	E290/WT	1.0	mg/L	614	RRV	30 - 500 mg/L	--	--	--	--	--
Colour, apparent	E330/WT	2.0	CU	163		5 CU	--	--	--	--	--
Conductivity	E100/WT	1.0	µS/cm	1340		--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100/WT	0.50	mg/L	678		80 - 100 mg/L	--	--	--	--	--
pH	E108/WT	0.10	pH units	7.98		6.5 - 8.5 pH units	--	--	--	--	--
Solids, total dissolved [TDS]	E162/WT	10	mg/L	822	DLDS	500 mg/L	--	--	--	--	--
Turbidity	E121/WT	0.10	NTU	46.8		5 NTU	--	--	--	--	--
Anions and Nutrients											
Ammonia, total (as N)	E298/WT	0.0050	mg/L	10.4	DLHC	--	--	--	--	--	--
Chloride	E235.Cl/WT	0.50	mg/L	28.7	DLDS	250 mg/L	--	--	--	--	--
Fluoride	E235.F/WT	0.020	mg/L	<0.100	DLDS	--	1.5 mg/L	--	--	--	--
Nitrate (as N)	E235.NO3/WT	0.020	mg/L	<0.100	DLDS	--	10 mg/L	--	--	--	--
Nitrite (as N)	E235.NO2/WT	0.010	mg/L	<0.050	DLDS	--	1 mg/L	--	--	--	--
Phosphate, ortho-, dissolved (as P)	E378-U/WT	0.0010	mg/L	<0.0010		--	--	--	--	--	--
Sulfate (as SO4)	E235.SO4/WT	0.30	mg/L	144	DLDS	500 mg/L	--	--	--	--	--
Dissolved Metals											
Aluminum, dissolved	E421/WT	0.0010	mg/L	0.0034		0.1 mg/L	--	--	--	--	--
Antimony, dissolved	E421/WT	0.00010	mg/L	<0.00010		--	0.006 mg/L	--	--	--	--
Arsenic, dissolved	E421/WT	0.00010	mg/L	0.00407		--	0.01 mg/L	--	--	--	--
Barium, dissolved	E421/WT	0.00010	mg/L	0.142		--	1 mg/L	--	--	--	--
Beryllium, dissolved	E421/WT	0.000020	mg/L	<0.000020		--	--	--	--	--	--
Bismuth, dissolved	E421/WT	0.000050	mg/L	<0.000050		--	--	--	--	--	--
Boron, dissolved	E421/WT	0.010	mg/L	0.550		--	5 mg/L	--	--	--	--
Cadmium, dissolved	E421/WT	0.0000050	mg/L	<0.0000050		--	0.005 mg/L	--	--	--	--
Calcium, dissolved	E421/WT	0.050	mg/L	147		--	--	--	--	--	--
Cesium, dissolved	E421/WT	0.000010	mg/L	<0.000010		--	--	--	--	--	--
Chromium, dissolved	E421/WT	0.00050	mg/L	<0.00050		--	0.05 mg/L	--	--	--	--
Cobalt, dissolved	E421/WT	0.00010	mg/L	0.00354		--	--	--	--	--	--
Copper, dissolved	E421/WT	0.00020	mg/L	0.00102		1 mg/L	--	--	--	--	--



Analyte	Method/Lab	LOR	Unit	WT2333946-017 (Continued)	ONDWS AO/OG	ONDWS MAC	--	--	--	--
Dissolved Metals - Continued										
Iron, dissolved	E421/WT	0.010	mg/L	4.44	0.3 mg/L	--	--	--	--	--
Lead, dissolved	E421/WT	0.000050	mg/L	0.000426	--	0.01 mg/L	--	--	--	--
Lithium, dissolved	E421/WT	0.0010	mg/L	0.0041	--	--	--	--	--	--
Magnesium, dissolved	E421/WT	0.0050	mg/L	75.4	--	--	--	--	--	--
Manganese, dissolved	E421/WT	0.00010	mg/L	0.613	0.05 mg/L	--	--	--	--	--
Molybdenum, dissolved	E421/WT	0.000050	mg/L	0.000433	--	--	--	--	--	--
Nickel, dissolved	E421/WT	0.00050	mg/L	0.00800	--	--	--	--	--	--
Phosphorus, dissolved	E421/WT	0.050	mg/L	<0.050	--	--	--	--	--	--
Potassium, dissolved	E421/WT	0.050	mg/L	22.4	--	--	--	--	--	--
Rubidium, dissolved	E421/WT	0.00020	mg/L	0.00666	--	--	--	--	--	--
Selenium, dissolved	E421/WT	0.000050	mg/L	0.000057	--	0.05 mg/L	--	--	--	--
Silicon, dissolved	E421/WT	0.050	mg/L	6.48	--	--	--	--	--	--
Silver, dissolved	E421/WT	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, dissolved	E421/WT	0.050	mg/L	27.7	200 mg/L	20 mg/L	--	--	--	--
Strontium, dissolved	E421/WT	0.00020	mg/L	0.448	--	--	--	--	--	--
Sulfur, dissolved	E421/WT	0.50	mg/L	57.5	--	--	--	--	--	--
Tellurium, dissolved	E421/WT	0.00020	mg/L	<0.00020	--	--	--	--	--	--
Thallium, dissolved	E421/WT	0.000010	mg/L	0.000420	--	--	--	--	--	--
Thorium, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Tin, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Titanium, dissolved	E421/WT	0.00030	mg/L	<0.00030	--	--	--	--	--	--
Tungsten, dissolved	E421/WT	0.00010	mg/L	<0.00010	--	--	--	--	--	--
Uranium, dissolved	E421/WT	0.000010	mg/L	0.000683	--	0.02 mg/L	--	--	--	--
Vanadium, dissolved	E421/WT	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Zinc, dissolved	E421/WT	0.0010	mg/L	0.0149	5 mg/L	--	--	--	--	--
Zirconium, dissolved	E421/WT	0.00020	mg/L	0.00059	--	--	--	--	--	--
Dissolved metals filtration location	EP421/WT		-	Field	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
OW-20D	Water	Alkalinity, total (as CaCO ₃)		ONDWS	AO/OG	614 mg/L	30-500 mg/L
	Water	Colour, apparent	May interfere with disinfection; removal is important to ensure effective treatment.	ONDWS	AO/OG	163 CU	5 CU
	Water	Hardness (as CaCO ₃), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO ₃) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	AO/OG	678 mg/L	80-100 mg/L
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	ONDWS	AO/OG	822 mg/L	500 mg/L
	Water	Turbidity	Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU. Particles can harbour microorganisms, protecting them from disinfection, and can entrap heavy metals and biocides; elevated or fluctuating turbidity in filtered water can indicate a problem with the water treatment process and a potential increased risk of pathogens in treated water.	ONDWS	AO/OG	46.8 NTU	5 NTU
	Water	Iron, dissolved	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	ONDWS	AO/OG	4.44 mg/L	0.3 mg/L
	Water	Manganese, dissolved	Based on taste and staining of laundry and plumbing fixtures.	ONDWS	AO/OG	0.613 mg/L	0.05 mg/L
	Water	Sodium, dissolved	Based on taste; where a sodium-based water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	ONDWS	MAC	27.7 mg/L	20 mg/L

Key:

- ONDWS Ontario Drinking Water Regulation (JAN, 2020)
- AO/OG Aesthetic Objective/Operational Guideline (2006)
- MAC Schedule 1 (Microbiological) and 2 (Chemical) Standards (JAN,2020)



QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : WT2333946</p> <p>Client : Bluewater Geoscience Consultants Inc.</p> <p>Contact : Breton Lemieux</p> <p>Address : 42 Shadyridge Place Kitchener ON Canada N2N 3J1</p> <p>Telephone : 519 744 4123</p> <p>Project : BG-850</p> <p>PO : ----</p> <p>C-O-C number : 20-887776, 20-887777</p> <p>Sampler : BJC</p> <p>Site : ----</p> <p>Quote number : SOA</p> <p>No. of samples received : 17</p> <p>No. of samples analysed : 17</p>	<p>Page : 1 of 34</p> <p>Laboratory : ALS Environmental - Waterloo</p> <p>Account Manager : Gayle Braun</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 19-Oct-2023 13:15</p> <p>Issue Date : 27-Oct-2023 17:40</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Dissolved Metals	WT2333946-008	OW-B	Thorium, dissolved	7440-29-1	E423A	58.2 % ^K	70.0-130%	Recovery less than lower data quality objective
Dissolved Metals	WT2333946-008	OW-B	Zirconium, dissolved	7440-67-7	E423A	58.1 % ^K	70.0-130%	Recovery less than lower data quality objective

Result Qualifiers

Qualifier	Description
K	Matrix Spike recovery outside ALS DQO due to sample matrix effects.



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-1	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-10D	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-10S	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-12D	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-13D	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-13S	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-16D	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-16S	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-20D	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-20S	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-2D	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-2S	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-3D	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-3S	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-7D	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Ammonia by Fluorescence											
Amber glass total (sulfuric acid) [ON MECP] OW-7S	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) [ON MECP] OW-B	E298	19-Oct-2023	21-Oct-2023	28 days	3 days	✔	23-Oct-2023	28 days	5 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP] OW-1	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP] OW-2D	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP] OW-2S	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP] OW-3D	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP] OW-3S	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP] OW-7S	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP] OW-10D	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP] OW-10S	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-12D	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-13D	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-13S	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-16S	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-7D	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-B	E235.Cl	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-16D	E235.Cl	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	24-Oct-2023	28 days	6 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-20D	E235.Cl	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	24-Oct-2023	28 days	6 days	✔	
Anions and Nutrients : Chloride in Water by IC											
HDPE [ON MECP] OW-20S	E235.Cl	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	24-Oct-2023	28 days	6 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-1	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-10D	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-10S	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-12D	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-13D	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-13S	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-16S	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-2D	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-2S	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-3D	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-3S	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-7D	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-7S	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-B	E378-U	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-16D	E378-U	19-Oct-2023	24-Oct-2023	7 days	6 days	✔	25-Oct-2023	7 days	7 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-20D	E378-U	19-Oct-2023	24-Oct-2023	7 days	6 days	✔	25-Oct-2023	7 days	7 days	✔	
Anions and Nutrients : Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)											
HDPE [ON MECP] OW-20S	E378-U	19-Oct-2023	24-Oct-2023	7 days	6 days	✔	25-Oct-2023	7 days	7 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-1	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-2D	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-2S	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-3D	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-3S	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-7S	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-10D	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-10S	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-12D	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-13D	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-13S	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-16S	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-7D	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-B	E235.F	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-16D	E235.F	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	24-Oct-2023	28 days	6 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-20D	E235.F	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	24-Oct-2023	28 days	6 days	✔	
Anions and Nutrients : Fluoride in Water by IC											
HDPE [ON MECP] OW-20S	E235.F	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	24-Oct-2023	28 days	6 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-1	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-2D	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	



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Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-2S	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-3D	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-3S	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-7S	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-10D	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-10S	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-12D	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-13D	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-13S	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	



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Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-16S	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-7D	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-B	E235.NO3	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-16D	E235.NO3	19-Oct-2023	24-Oct-2023	7 days	6 days	✔	24-Oct-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-20D	E235.NO3	19-Oct-2023	24-Oct-2023	7 days	6 days	✔	24-Oct-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrate in Water by IC											
HDPE [ON MECP] OW-20S	E235.NO3	19-Oct-2023	24-Oct-2023	7 days	6 days	✔	24-Oct-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-1	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-2D	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-2S	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	



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Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-3D	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-3S	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-7S	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	20-Oct-2023	7 days	2 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-10D	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-10S	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-12D	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-13D	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-13S	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-16S	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	



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Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-7D	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-B	E235.NO2	19-Oct-2023	20-Oct-2023	7 days	2 days	✔	24-Oct-2023	7 days	5 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-16D	E235.NO2	19-Oct-2023	24-Oct-2023	7 days	6 days	✔	24-Oct-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-20D	E235.NO2	19-Oct-2023	24-Oct-2023	7 days	6 days	✔	24-Oct-2023	7 days	6 days	✔	
Anions and Nutrients : Nitrite in Water by IC											
HDPE [ON MECP] OW-20S	E235.NO2	19-Oct-2023	24-Oct-2023	7 days	6 days	✔	24-Oct-2023	7 days	6 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-1	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-2D	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-2S	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-3D	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	



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Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-3S	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-7S	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-10D	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-10S	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-12D	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-13D	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-13S	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-16S	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-7D	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	



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Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-B	E235.SO4	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	24-Oct-2023	28 days	5 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-16D	E235.SO4	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	24-Oct-2023	28 days	6 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-20D	E235.SO4	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	24-Oct-2023	28 days	6 days	✔	
Anions and Nutrients : Sulfate in Water by IC											
HDPE [ON MECP] OW-20S	E235.SO4	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	24-Oct-2023	28 days	6 days	✔	
Dissolved Metals : Digested Dissolved Metals by CRC ICPMS											
HDPE dissolved (nitric acid) OW-B	E423A	19-Oct-2023	23-Oct-2023	180 days	4 days	✔	23-Oct-2023	180 days	4 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-1	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-10D	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-10S	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-12D	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔	



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			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) OW-13D	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) OW-13S	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) OW-16D	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) OW-16S	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) OW-20D	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) OW-20S	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) OW-2D	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) OW-2S	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) OW-3D	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔



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Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-3S	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-7D	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔	
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS											
HDPE dissolved (nitric acid) OW-7S	E421	19-Oct-2023	20-Oct-2023	180 days	1 days	✔	20-Oct-2023	180 days	2 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-1	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-2D	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-2S	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-3D	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-3S	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-7S	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	



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			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-10D	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-10S	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-12D	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-13D	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-13S	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-16S	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-7D	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-B	E290	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-16D	E290	19-Oct-2023	24-Oct-2023	14 days	6 days	✔	25-Oct-2023	14 days	7 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-20D	E290	19-Oct-2023	24-Oct-2023	14 days	6 days	✔	25-Oct-2023	14 days	7 days	✔	
Physical Tests : Alkalinity Species by Titration											
HDPE [ON MECP] OW-20S	E290	19-Oct-2023	24-Oct-2023	14 days	6 days	✔	25-Oct-2023	14 days	7 days	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-1	E330	19-Oct-2023	---	---	---		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-10D	E330	19-Oct-2023	---	---	---		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-10S	E330	19-Oct-2023	---	---	---		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-12D	E330	19-Oct-2023	---	---	---		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-13D	E330	19-Oct-2023	---	---	---		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-13S	E330	19-Oct-2023	---	---	---		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-16D	E330	19-Oct-2023	---	---	---		19-Oct-2023	48 hrs	16 hrs	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-16S	E330	19-Oct-2023	----	----	----		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-20D	E330	19-Oct-2023	----	----	----		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-20S	E330	19-Oct-2023	----	----	----		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-2D	E330	19-Oct-2023	----	----	----		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-2S	E330	19-Oct-2023	----	----	----		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-3D	E330	19-Oct-2023	----	----	----		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-3S	E330	19-Oct-2023	----	----	----		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-7D	E330	19-Oct-2023	----	----	----		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-7S	E330	19-Oct-2023	----	----	----		19-Oct-2023	48 hrs	16 hrs	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : Colour (Apparent) by Spectrometer											
HDPE [ON MECP] OW-B	E330	19-Oct-2023	----	----	----		19-Oct-2023	48 hrs	16 hrs	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-1	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-2D	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-2S	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-3D	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-3S	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-7S	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	20-Oct-2023	28 days	2 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-10D	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	21-Oct-2023	28 days	3 days	✔	
Physical Tests : Conductivity in Water											
HDPE [ON MECP] OW-10S	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	21-Oct-2023	28 days	3 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-12D	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	21-Oct-2023	28 days	3 days	✔
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-13D	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	21-Oct-2023	28 days	3 days	✔
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-13S	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	21-Oct-2023	28 days	3 days	✔
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-16S	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	21-Oct-2023	28 days	3 days	✔
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-7D	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	21-Oct-2023	28 days	3 days	✔
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-B	E100	19-Oct-2023	20-Oct-2023	28 days	2 days	✔	21-Oct-2023	28 days	3 days	✔
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-16D	E100	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	25-Oct-2023	28 days	7 days	✔
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-20D	E100	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	25-Oct-2023	28 days	7 days	✔
Physical Tests : Conductivity in Water										
HDPE [ON MECP] OW-20S	E100	19-Oct-2023	24-Oct-2023	28 days	6 days	✔	25-Oct-2023	28 days	7 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-1	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-2D	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-2S	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-3D	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-3S	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-7S	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	20-Oct-2023	14 days	2 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-10D	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-10S	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-12D	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-13D	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-13S	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-16S	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-7D	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-B	E108	19-Oct-2023	20-Oct-2023	14 days	2 days	✔	21-Oct-2023	14 days	3 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-16D	E108	19-Oct-2023	24-Oct-2023	14 days	6 days	✔	25-Oct-2023	14 days	7 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-20D	E108	19-Oct-2023	24-Oct-2023	14 days	6 days	✔	25-Oct-2023	14 days	7 days	✔	
Physical Tests : pH by Meter											
HDPE [ON MECP] OW-20S	E108	19-Oct-2023	24-Oct-2023	14 days	6 days	✔	25-Oct-2023	14 days	7 days	✔	
Physical Tests : TDS by Gravimetry											
HDPE [ON MECP] OW-1	E162	19-Oct-2023	----	----	----		20-Oct-2023	7 days	2 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-2D	E162	19-Oct-2023	----	----	----		20-Oct-2023	7 days	2 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-2S	E162	19-Oct-2023	----	----	----		20-Oct-2023	7 days	2 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-3S	E162	19-Oct-2023	----	----	----		20-Oct-2023	7 days	2 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-10D	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-10S	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-12D	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-13D	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-13S	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-16D	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-16S	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-20D	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-20S	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-3D	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-7D	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-7S	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP] OW-B	E162	19-Oct-2023	----	----	----		23-Oct-2023	7 days	5 days	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-1	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-10D	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-10S	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-12D	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-13D	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-13S	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-16D	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-16S	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-20D	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-20S	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔
Physical Tests : Turbidity by Nephelometry										
HDPE [BOD HT-4d] OW-2D	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
Physical Tests : Turbidity by Nephelometry											
HDPE [BOD HT-4d] OW-2S	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔	
Physical Tests : Turbidity by Nephelometry											
HDPE [BOD HT-4d] OW-3D	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔	
Physical Tests : Turbidity by Nephelometry											
HDPE [BOD HT-4d] OW-3S	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔	
Physical Tests : Turbidity by Nephelometry											
HDPE [BOD HT-4d] OW-7D	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔	
Physical Tests : Turbidity by Nephelometry											
HDPE [BOD HT-4d] OW-7S	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔	
Physical Tests : Turbidity by Nephelometry											
HDPE [BOD HT-4d] OW-B	E121	19-Oct-2023	----	----	----		20-Oct-2023	48 hrs	36 hrs	✔	

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: * = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		Evaluation
			QC	Regular	Actual	Expected	
Analytical Methods							
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1196529	3	44	6.8	5.0	✓
Ammonia by Fluorescence	E298	1197084	2	40	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1196533	3	54	5.5	5.0	✓
Colour (Apparent) by Spectrometer	E330	1194765	2	28	7.1	5.0	✓
Conductivity in Water	E100	1196528	3	55	5.4	5.0	✓
Digested Dissolved Metals by CRC ICPMS	E423A	1199837	1	1	100.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1195974	1	19	5.2	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	1196536	3	54	5.5	5.0	✓
Fluoride in Water by IC	E235.F	1196530	3	43	6.9	5.0	✓
Nitrate in Water by IC	E235.NO3	1196531	3	58	5.1	5.0	✓
Nitrite in Water by IC	E235.NO2	1196532	3	57	5.2	5.0	✓
pH by Meter	E108	1196527	3	60	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1196534	3	44	6.8	5.0	✓
TDS by Gravimetry	E162	1197019	2	39	5.1	5.0	✓
Turbidity by Nephelometry	E121	1196635	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1196529	3	44	6.8	5.0	✓
Ammonia by Fluorescence	E298	1197084	2	40	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1196533	3	54	5.5	5.0	✓
Colour (Apparent) by Spectrometer	E330	1194765	2	28	7.1	5.0	✓
Conductivity in Water	E100	1196528	3	55	5.4	5.0	✓
Digested Dissolved Metals by CRC ICPMS	E423A	1199837	1	1	100.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1195974	1	19	5.2	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	1196536	3	54	5.5	5.0	✓
Fluoride in Water by IC	E235.F	1196530	3	43	6.9	5.0	✓
Nitrate in Water by IC	E235.NO3	1196531	3	58	5.1	5.0	✓
Nitrite in Water by IC	E235.NO2	1196532	3	57	5.2	5.0	✓
pH by Meter	E108	1196527	3	60	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1196534	3	44	6.8	5.0	✓
TDS by Gravimetry	E162	1197019	2	39	5.1	5.0	✓
Turbidity by Nephelometry	E121	1196635	1	20	5.0	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1196529	3	44	6.8	5.0	✓
Ammonia by Fluorescence	E298	1197084	2	40	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1196533	3	54	5.5	5.0	✓



Matrix: **Water**

Evaluation: * = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
Analytical Methods							
Method Blanks (MB) - Continued							
Colour (Apparent) by Spectrometer	E330	1194765	2	28	7.1	5.0	✓
Conductivity in Water	E100	1196528	3	55	5.4	5.0	✓
Digested Dissolved Metals by CRC ICPMS	E423A	1199837	1	1	100.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1195974	1	19	5.2	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	1196536	3	54	5.5	5.0	✓
Fluoride in Water by IC	E235.F	1196530	3	43	6.9	5.0	✓
Nitrate in Water by IC	E235.NO3	1196531	3	58	5.1	5.0	✓
Nitrite in Water by IC	E235.NO2	1196532	3	57	5.2	5.0	✓
Sulfate in Water by IC	E235.SO4	1196534	3	44	6.8	5.0	✓
TDS by Gravimetry	E162	1197019	2	39	5.1	5.0	✓
Turbidity by Nephelometry	E121	1196635	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1197084	2	40	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1196533	3	54	5.5	5.0	✓
Digested Dissolved Metals by CRC ICPMS	E423A	1199837	1	1	100.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1195974	1	19	5.2	5.0	✓
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	1196536	3	54	5.5	5.0	✓
Fluoride in Water by IC	E235.F	1196530	3	43	6.9	5.0	✓
Nitrate in Water by IC	E235.NO3	1196531	3	58	5.1	5.0	✓
Nitrite in Water by IC	E235.NO2	1196532	3	57	5.2	5.0	✓
Sulfate in Water by IC	E235.SO4	1196534	3	44	6.8	5.0	✓



Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Conductivity in Water	E100 ALS Environmental - Waterloo	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter	E108 ALS Environmental - Waterloo	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Turbidity by Nephelometry	E121 ALS Environmental - Waterloo	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
TDS by Gravimetry	E162 ALS Environmental - Waterloo	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Chloride in Water by IC	E235.Cl ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC	E235.NO2 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Colour (Apparent) by Spectrometer	E330 ALS Environmental - Waterloo	Water	APHA 2120 C (mod)	Colour (Apparent) is measured in an unfiltered sample spectrophotometrically using the single wavelength method. The colour contribution of settleable solids are not included in the result. This method is intended for potable waters. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment.
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U ALS Environmental - Waterloo	Water	APHA 4500-P F (mod)	Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter. Field filtration is recommended to ensure test results represent conditions at time of sampling.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Digested Dissolved Metals by CRC ICPMS	E423A ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45um), digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Waterloo	Water	APHA 2340B	"Hardness (as CaCO ₃), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO ₃ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO ₃ .
Dissolved Metals Water Digestion and Filtration	EP423 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um) and digested with nitric and hydrochloric acids.

QUALITY CONTROL REPORT

Work Order	: WT2333946	Page	: 1 of 21
Client	: Bluewater Geoscience Consultants Inc.	Laboratory	: ALS Environmental - Waterloo
Contact	: Breton Lemieux	Account Manager	: Gayle Braun
Address	: 42 Shadyridge Place Kitchener ON Canada N2N 3J1	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	:	Telephone	: +1 519 886 6910
Project	: BG-850	Date Samples Received	: 19-Oct-2023 13:15
PO	: ----	Date Analysis Commenced	: 19-Oct-2023
C-O-C number	: 20-887776, 20-887777	Issue Date	: 27-Oct-2023 17:39
Sampler	: BJC 519 744 4123		
Site	: ----		
Quote number	: SOA		
No. of samples received	: 17		
No. of samples analysed	: 17		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Waterloo Metals, Waterloo, Ontario
John Tang	Lab Analyst	Waterloo Inorganics, Waterloo, Ontario
Jon Fisher	Production Manager, Environmental	Waterloo Inorganics, Waterloo, Ontario
Jon Fisher	Production Manager, Environmental	Waterloo Metals, Waterloo, Ontario
Nik Perkio	Inorganics Analyst	Waterloo Inorganics, Waterloo, Ontario

Page : 2 of 21
Work Order : WT2333946
Client : Bluewater Geoscience Consultants Inc.
Project : BG-850



General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
= Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.



Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1194765)											
HA2300874-001	Anonymous	Colour, apparent	----	E330	2.0	CU	7.8	7.5	0.3	Diff <2x LOR	----
Physical Tests (QC Lot: 1194766)											
WT2333946-012	OW-13S	Colour, apparent	----	E330	40.0	CU	4870	4830	0.973%	20%	----
Physical Tests (QC Lot: 1196527)											
HA2300894-001	Anonymous	pH	----	E108	0.10	pH units	7.74	7.78	0.515%	4%	----
Physical Tests (QC Lot: 1196528)											
HA2300894-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	552	553	0.181%	10%	----
Physical Tests (QC Lot: 1196529)											
HA2300894-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	174	174	0.172%	20%	----
Physical Tests (QC Lot: 1196635)											
WT2332795-001	Anonymous	Turbidity	----	E121	0.10	NTU	8.44	8.58	1.64%	15%	----
Physical Tests (QC Lot: 1197019)											
HA2300894-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	376	342	9.47%	20%	----
Physical Tests (QC Lot: 1197369)											
WT2333946-007	OW-7D	pH	----	E108	0.10	pH units	7.56	7.57	0.132%	4%	----
Physical Tests (QC Lot: 1197370)											
WT2333946-007	OW-7D	Conductivity	----	E100	1.0	µS/cm	1350	1310	2.63%	10%	----
Physical Tests (QC Lot: 1197371)											
WT2333946-007	OW-7D	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	625	614	1.80%	20%	----
Physical Tests (QC Lot: 1200185)											
WT2333946-005	OW-3D	Solids, total dissolved [TDS]	----	E162	20	mg/L	932	927	0.592%	20%	----
Physical Tests (QC Lot: 1201895)											
WT2333946-016	OW-20S	pH	----	E108	0.10	pH units	8.16	8.13	0.368%	4%	----
Physical Tests (QC Lot: 1201896)											
WT2333946-016	OW-20S	Conductivity	----	E100	1.0	µS/cm	681	679	0.294%	10%	----
Physical Tests (QC Lot: 1201897)											
WT2333946-016	OW-20S	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	362	365	0.780%	20%	----
Anions and Nutrients (QC Lot: 1196530)											
WT2332795-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.069	0.068	0.0008	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1196531)											



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Anions and Nutrients (QC Lot: 1196531) - continued											
WT2332795-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1196532)											
WT2332795-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1196533)											
WT2332795-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	15.2	15.2	0.165%	20%	----
Anions and Nutrients (QC Lot: 1196534)											
WT2332795-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	66.8	66.8	0.0402%	20%	----
Anions and Nutrients (QC Lot: 1196536)											
HA2300894-001	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	0.0345	0.0344	0.349%	20%	----
Anions and Nutrients (QC Lot: 1196695)											
WT2333818-001	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0500	mg/L	1.82	1.84	1.12%	20%	----
Anions and Nutrients (QC Lot: 1197084)											
WT2333841-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.314	0.316	0.666%	20%	----
Anions and Nutrients (QC Lot: 1197097)											
WT2333501-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0500	mg/L	1.44	1.51	4.95%	20%	----
Anions and Nutrients (QC Lot: 1197364)											
WT2333946-007	OW-7D	Fluoride	16984-48-8	E235.F	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1197365)											
WT2333946-007	OW-7D	Nitrate (as N)	14797-55-8	E235.NO3	0.100	mg/L	3.27	3.27	0.0230%	20%	----
Anions and Nutrients (QC Lot: 1197366)											
WT2333946-007	OW-7D	Nitrite (as N)	14797-65-0	E235.NO2	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1197367)											
WT2333946-007	OW-7D	Chloride	16887-00-6	E235.Cl	2.50	mg/L	38.8	38.5	0.743%	20%	----
Anions and Nutrients (QC Lot: 1197368)											
WT2333946-007	OW-7D	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	111	112	0.0474%	20%	----
Anions and Nutrients (QC Lot: 1201889)											
WT2333946-015	OW-16D	Fluoride	16984-48-8	E235.F	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1201890)											
WT2333946-015	OW-16D	Nitrate (as N)	14797-55-8	E235.NO3	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1201891)											
WT2333946-015	OW-16D	Nitrite (as N)	14797-65-0	E235.NO2	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1201892)											
WT2333946-015	OW-16D	Chloride	16887-00-6	E235.Cl	2.50	mg/L	23.3	22.6	0.77	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Anions and Nutrients (QC Lot: 1201893)											
WT2333946-015	OW-16D	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	113	113	0.334%	20%	----
Anions and Nutrients (QC Lot: 1201898)											
WT2333946-017	OW-20D	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1195974)											
WT2333946-001	OW-1	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0104	0.0105	1.31%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00055	0.00056	0.00001	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0478	0.0488	2.12%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.081	0.080	0.00001	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000130	0.0000118	0.0000012	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	111	111	0.674%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00033	0.00032	0.000005	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00060	0.00060	0.000002	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.499	0.491	1.54%	20%	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000089	0.000087	0.000002	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0032	0.0033	0.00010	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	40.6	40.5	0.126%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0612	0.0616	0.515%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000264	0.000254	0.000010	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00078	0.00075	0.00003	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	1.38	1.39	0.794%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00062	0.00064	0.00002	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000254	0.000206	0.000048	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	5.70	5.97	4.65%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	7.15	7.16	0.252%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.175	0.173	0.737%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	10.4	10.1	3.02%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----



Sub-Matrix: **Water**

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1195974) - continued											
WT2333946-001	OW-1	Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.000011	0.000011	0.0000002	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.000010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.000010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.000030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.000010	mg/L	0.00026	0.00025	0.000006	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00102	0.000999	1.64%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.000050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0067	0.0072	0.0005	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.000020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1199837)											
WT2333946-008	OW-B	Aluminum, dissolved	7429-90-5	E423A	0.0030	mg/L	0.0057	0.0053	0.0004	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E423A	0.00010	mg/L	0.00011	0.00012	0.000007	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E423A	0.00010	mg/L	0.00028	0.00027	0.00002	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E423A	0.00010	mg/L	0.0328	0.0331	0.953%	20%	----
		Beryllium, dissolved	7440-41-7	E423A	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E423A	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E423A	0.010	mg/L	0.651	0.660	1.38%	20%	----
		Cadmium, dissolved	7440-43-9	E423A	0.0000050	mg/L	0.0000306	0.0000279	0.0000027	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E423A	0.050	mg/L	238	234	1.60%	20%	----
		Cesium, dissolved	7440-46-2	E423A	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E423A	0.00010	mg/L	0.00023	0.00024	0.00001	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E423A	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E423A	0.00050	mg/L	0.00305	0.00303	0.00002	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E423A	0.010	mg/L	0.021	0.027	0.006	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E423A	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E423A	0.0010	mg/L	0.0013	0.0010	0.0002	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E423A	0.0500	mg/L	102	104	1.83%	20%	----
		Manganese, dissolved	7439-96-5	E423A	0.00010	mg/L	0.00451	0.00434	3.84%	20%	----
		Molybdenum, dissolved	7439-98-7	E423A	0.000050	mg/L	0.000329	0.000342	0.000012	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E423A	0.00050	mg/L	0.00079	0.00074	0.00004	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E423A	0.050	mg/L	0.106	0.106	0.0007	Diff <2x LOR	----
Potassium, dissolved	7440-09-7	E423A	0.050	mg/L	7.72	7.52	2.69%	20%	----		
Rubidium, dissolved	7440-17-7	E423A	0.00020	mg/L	0.00068	0.00072	0.00003	Diff <2x LOR	----		
		Selenium, dissolved	7782-49-2	E423A	0.000050	mg/L	0.000146	0.000148	0.000002	Diff <2x LOR	----



Sub-Matrix: **Water**

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 1199837) - continued											
WT2333946-008	OW-B	Silicon, dissolved	7440-21-3	E423A	0.10	mg/L	4.57	4.49	1.79%	20%	----
		Silver, dissolved	7440-22-4	E423A	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E423A	0.050	mg/L	15.2	15.1	0.936%	20%	----
		Strontium, dissolved	7440-24-6	E423A	0.00020	mg/L	0.448	0.474	5.57%	20%	----
		Sulfur, dissolved	7704-34-9	E423A	0.50	mg/L	206	207	0.726%	20%	----
		Tellurium, dissolved	13494-80-9	E423A	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E423A	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E423A	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E423A	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E423A	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E423A	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E423A	0.000010	mg/L	0.000909	0.000922	1.45%	20%	----
		Vanadium, dissolved	7440-62-2	E423A	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E423A	0.0030	mg/L	0.0080	0.0079	0.00009	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E423A	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----



Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1194765)						
Colour, apparent	---	E330	2	CU	<2.0	---
Physical Tests (QCLot: 1194766)						
Colour, apparent	---	E330	2	CU	<2.0	---
Physical Tests (QCLot: 1196528)						
Conductivity	---	E100	1	µS/cm	<1.0	---
Physical Tests (QCLot: 1196529)						
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	<1.0	---
Physical Tests (QCLot: 1196635)						
Turbidity	---	E121	0.1	NTU	<0.10	---
Physical Tests (QCLot: 1197019)						
Solids, total dissolved [TDS]	---	E162	10	mg/L	<10	---
Physical Tests (QCLot: 1197370)						
Conductivity	---	E100	1	µS/cm	<1.0	---
Physical Tests (QCLot: 1197371)						
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	1.7	---
Physical Tests (QCLot: 1200185)						
Solids, total dissolved [TDS]	---	E162	10	mg/L	<10	---
Physical Tests (QCLot: 1201896)						
Conductivity	---	E100	1	µS/cm	<1.0	---
Physical Tests (QCLot: 1201897)						
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	1.5	---
Anions and Nutrients (QCLot: 1196530)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	---
Anions and Nutrients (QCLot: 1196531)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	---
Anions and Nutrients (QCLot: 1196532)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	---
Anions and Nutrients (QCLot: 1196533)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	---
Anions and Nutrients (QCLot: 1196534)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	---
Anions and Nutrients (QCLot: 1196536)						



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients (QCLot: 1196536) - continued						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1196695)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1197084)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1197097)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1197364)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1197365)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1197366)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 1197367)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1197368)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1201889)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1201890)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1201891)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 1201892)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1201893)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1201898)						
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	<0.0010	----
Dissolved Metals (QCLot: 1195974)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1195974) - continued						
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1199837)						



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1199837) - continued						
Aluminum, dissolved	7429-90-5	E423A	0.003	mg/L	<0.0030	----
Antimony, dissolved	7440-36-0	E423A	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E423A	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E423A	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E423A	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E423A	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E423A	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E423A	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E423A	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E423A	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E423A	0.0001	mg/L	<0.00010	----
Cobalt, dissolved	7440-48-4	E423A	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E423A	0.0005	mg/L	<0.00050	----
Iron, dissolved	7439-89-6	E423A	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E423A	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E423A	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E423A	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E423A	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E423A	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E423A	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E423A	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E423A	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E423A	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E423A	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E423A	0.1	mg/L	<0.10	----
Silver, dissolved	7440-22-4	E423A	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E423A	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E423A	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E423A	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E423A	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E423A	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E423A	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E423A	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E423A	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E423A	0.0001	mg/L	<0.00010	----



Sub-Matrix: **Water**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
Dissolved Metals (QCLot: 1199837) - continued						
Uranium, dissolved	7440-61-1	E423A	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E423A	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E423A	0.003	mg/L	<0.0030	----
Zirconium, dissolved	7440-67-7	E423A	0.0002	mg/L	<0.00020	----



Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				Qualifier
					Spike	Recovery (%)	Recovery Limits (%)		
					Concentration	LCS	Low	High	
Physical Tests (QCLot: 1194765)									
Colour, apparent	---	E330	2	CU	25 CU	108	70.0	130	---
Physical Tests (QCLot: 1194766)									
Colour, apparent	---	E330	2	CU	25 CU	100	70.0	130	---
Physical Tests (QCLot: 1196527)									
pH	---	E108	---	pH units	7 pH units	100	98.0	102	---
Physical Tests (QCLot: 1196528)									
Conductivity	---	E100	1	µS/cm	1409 µS/cm	102	90.0	110	---
Physical Tests (QCLot: 1196529)									
Alkalinity, total (as CaCO ₃)	---	E290	1	mg/L	150 mg/L	108	85.0	115	---
Physical Tests (QCLot: 1196635)									
Turbidity	---	E121	0.1	NTU	200 NTU	94.5	85.0	115	---
Physical Tests (QCLot: 1197019)									
Solids, total dissolved [TDS]	---	E162	10	mg/L	1000 mg/L	94.2	85.0	115	---
Physical Tests (QCLot: 1197369)									
pH	---	E108	---	pH units	7 pH units	100	98.0	102	---
Physical Tests (QCLot: 1197370)									
Conductivity	---	E100	1	µS/cm	1409 µS/cm	101	90.0	110	---
Physical Tests (QCLot: 1197371)									
Alkalinity, total (as CaCO ₃)	---	E290	1	mg/L	150 mg/L	111	85.0	115	---
Physical Tests (QCLot: 1200185)									
Solids, total dissolved [TDS]	---	E162	10	mg/L	1000 mg/L	102	85.0	115	---
Physical Tests (QCLot: 1201895)									
pH	---	E108	---	pH units	7 pH units	100	98.0	102	---
Physical Tests (QCLot: 1201896)									
Conductivity	---	E100	1	µS/cm	1409 µS/cm	101	90.0	110	---
Physical Tests (QCLot: 1201897)									
Alkalinity, total (as CaCO ₃)	---	E290	1	mg/L	150 mg/L	108	85.0	115	---
Anions and Nutrients (QCLot: 1196530)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	---
Anions and Nutrients (QCLot: 1196531)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	99.3	90.0	110	---



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1196532)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	97.2	90.0	110	----
Anions and Nutrients (QCLot: 1196533)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1196534)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1196536)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.0212 mg/L	103	80.0	120	----
Anions and Nutrients (QCLot: 1196695)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.0212 mg/L	104	80.0	120	----
Anions and Nutrients (QCLot: 1197084)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	105	85.0	115	----
Anions and Nutrients (QCLot: 1197097)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	105	85.0	115	----
Anions and Nutrients (QCLot: 1197364)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1197365)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	98.5	90.0	110	----
Anions and Nutrients (QCLot: 1197366)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	98.6	90.0	110	----
Anions and Nutrients (QCLot: 1197367)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.7	90.0	110	----
Anions and Nutrients (QCLot: 1197368)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1201889)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1201890)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1201891)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	99.9	90.0	110	----
Anions and Nutrients (QCLot: 1201892)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1201893)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1201898)									
Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.001	mg/L	0.0212 mg/L	105	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1195974)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	100	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	98.6	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	103	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.0125 mg/L	104	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	105	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	103	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	100	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	98.0	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	99.9	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.0025 mg/L	105	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.0125 mg/L	98.8	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.0125 mg/L	99.1	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.0125 mg/L	98.3	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	98.1	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	105	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.0125 mg/L	102	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	109	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.0125 mg/L	104	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.0125 mg/L	99.0	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	98.4	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	104	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	98.5	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	101	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	98.4	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	103	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	98.0	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	104	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.0125 mg/L	101	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	103	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	99.8	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	102	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	103	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	98.3	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.0125 mg/L	99.7	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	103	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1195974) - continued									
Uranium, dissolved	7440-61-1	E421	0.0001	mg/L	0.00025 mg/L	103	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	101	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	99.3	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	98.6	80.0	120	----
Dissolved Metals (QCLot: 1199837)									
Aluminum, dissolved	7429-90-5	E423A	0.003	mg/L	0.1 mg/L	95.7	80.0	120	----
Antimony, dissolved	7440-36-0	E423A	0.0001	mg/L	0.05 mg/L	97.8	80.0	120	----
Arsenic, dissolved	7440-38-2	E423A	0.0001	mg/L	0.05 mg/L	98.3	80.0	120	----
Barium, dissolved	7440-39-3	E423A	0.0001	mg/L	0.0125 mg/L	93.4	80.0	120	----
Beryllium, dissolved	7440-41-7	E423A	0.00002	mg/L	0.005 mg/L	93.8	80.0	120	----
Bismuth, dissolved	7440-69-9	E423A	0.00005	mg/L	0.05 mg/L	95.3	80.0	120	----
Boron, dissolved	7440-42-8	E423A	0.01	mg/L	0.05 mg/L	95.4	80.0	120	----
Cadmium, dissolved	7440-43-9	E423A	0.000005	mg/L	0.005 mg/L	95.4	80.0	120	----
Calcium, dissolved	7440-70-2	E423A	0.05	mg/L	2.5 mg/L	94.1	80.0	120	----
Cesium, dissolved	7440-46-2	E423A	0.00001	mg/L	0.0025 mg/L	99.5	80.0	120	----
Chromium, dissolved	7440-47-3	E423A	0.0001	mg/L	0.0125 mg/L	97.9	80.0	120	----
Cobalt, dissolved	7440-48-4	E423A	0.0001	mg/L	0.0125 mg/L	96.8	80.0	120	----
Copper, dissolved	7440-50-8	E423A	0.0005	mg/L	0.0125 mg/L	96.8	80.0	120	----
Iron, dissolved	7439-89-6	E423A	0.01	mg/L	0.05 mg/L	97.6	80.0	120	----
Lead, dissolved	7439-92-1	E423A	0.00005	mg/L	0.025 mg/L	98.4	80.0	120	----
Lithium, dissolved	7439-93-2	E423A	0.001	mg/L	0.0125 mg/L	92.4	80.0	120	----
Magnesium, dissolved	7439-95-4	E423A	0.005	mg/L	2.5 mg/L	104	80.0	120	----
Manganese, dissolved	7439-96-5	E423A	0.0001	mg/L	0.0125 mg/L	96.3	80.0	120	----
Molybdenum, dissolved	7439-98-7	E423A	0.00005	mg/L	0.0125 mg/L	95.4	80.0	120	----
Nickel, dissolved	7440-02-0	E423A	0.0005	mg/L	0.025 mg/L	97.4	80.0	120	----
Phosphorus, dissolved	7723-14-0	E423A	0.05	mg/L	0.5 mg/L	93.8	80.0	120	----
Potassium, dissolved	7440-09-7	E423A	0.05	mg/L	2.5 mg/L	96.4	80.0	120	----
Rubidium, dissolved	7440-17-7	E423A	0.0002	mg/L	0.005 mg/L	95.7	80.0	120	----
Selenium, dissolved	7782-49-2	E423A	0.00005	mg/L	0.05 mg/L	91.8	80.0	120	----
Silicon, dissolved	7440-21-3	E423A	0.1	mg/L	0.5 mg/L	95.2	80.0	120	----
Silver, dissolved	7440-22-4	E423A	0.00001	mg/L	0.005 mg/L	97.7	80.0	120	----
Sodium, dissolved	7440-23-5	E423A	0.05	mg/L	2.5 mg/L	100	80.0	120	----
Strontium, dissolved	7440-24-6	E423A	0.0002	mg/L	0.0125 mg/L	101	80.0	120	----
Sulfur, dissolved	7704-34-9	E423A	0.5	mg/L	2.5 mg/L	94.9	80.0	120	----
Tellurium, dissolved	13494-80-9	E423A	0.0002	mg/L	0.005 mg/L	90.5	80.0	120	----
Thallium, dissolved	7440-28-0	E423A	0.00001	mg/L	0.05 mg/L	96.1	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1199837) - continued									
Thorium, dissolved	7440-29-1	E423A	0.0001	mg/L	0.005 mg/L	97.5	80.0	120	----
Tin, dissolved	7440-31-5	E423A	0.0001	mg/L	0.025 mg/L	96.1	80.0	120	----
Titanium, dissolved	7440-32-6	E423A	0.0003	mg/L	0.0125 mg/L	93.6	80.0	120	----
Tungsten, dissolved	7440-33-7	E423A	0.0001	mg/L	0.005 mg/L	97.2	80.0	120	----
Uranium, dissolved	7440-61-1	E423A	0.00001	mg/L	0.00025 mg/L	103	80.0	120	----
Vanadium, dissolved	7440-62-2	E423A	0.0005	mg/L	0.025 mg/L	98.6	80.0	120	----
Zinc, dissolved	7440-66-6	E423A	0.003	mg/L	0.025 mg/L	92.5	80.0	120	----
Zirconium, dissolved	7440-67-7	E423A	0.0002	mg/L	0.005 mg/L	98.1	80.0	120	----



Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1196530)										
WT2332795-001	Anonymous	Fluoride	16984-48-8	E235.F	0.981 mg/L	1 mg/L	98.1	75.0	125	----
Anions and Nutrients (QCLot: 1196531)										
WT2332795-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.45 mg/L	2.5 mg/L	98.0	75.0	125	----
Anions and Nutrients (QCLot: 1196532)										
WT2332795-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.515 mg/L	0.5 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1196533)										
WT2332795-001	Anonymous	Chloride	16887-00-6	E235.Cl	102 mg/L	100 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1196534)										
WT2332795-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	98.1 mg/L	100 mg/L	98.1	75.0	125	----
Anions and Nutrients (QCLot: 1196536)										
HA2300894-001	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	ND mg/L	0.0196 mg/L	ND	70.0	130	----
Anions and Nutrients (QCLot: 1196695)										
WT2333818-001	Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	ND mg/L	0.0196 mg/L	ND	70.0	130	----
Anions and Nutrients (QCLot: 1197084)										
WT2333841-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	0.1 mg/L	ND	75.0	125	----
Anions and Nutrients (QCLot: 1197097)										
WT2333501-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	0.1 mg/L	ND	75.0	125	----
Anions and Nutrients (QCLot: 1197364)										
WT2333946-007	OW-7D	Fluoride	16984-48-8	E235.F	5.17 mg/L	5 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1197365)										
WT2333946-007	OW-7D	Nitrate (as N)	14797-55-8	E235.NO3	12.6 mg/L	12.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1197366)										
WT2333946-007	OW-7D	Nitrite (as N)	14797-65-0	E235.NO2	2.54 mg/L	2.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1197367)										
WT2333946-007	OW-7D	Chloride	16887-00-6	E235.Cl	509 mg/L	500 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1197368)										
WT2333946-007	OW-7D	Sulfate (as SO4)	14808-79-8	E235.SO4	497 mg/L	500 mg/L	99.5	75.0	125	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1201889)										
WT2333946-015	OW-16D	Fluoride	16984-48-8	E235.F	5.05 mg/L	5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1201890)										
WT2333946-015	OW-16D	Nitrate (as N)	14797-55-8	E235.NO3	12.5 mg/L	12.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1201891)										
WT2333946-015	OW-16D	Nitrite (as N)	14797-65-0	E235.NO2	2.45 mg/L	2.5 mg/L	98.0	75.0	125	----
Anions and Nutrients (QCLot: 1201892)										
WT2333946-015	OW-16D	Chloride	16887-00-6	E235.Cl	493 mg/L	500 mg/L	98.5	75.0	125	----
Anions and Nutrients (QCLot: 1201893)										
WT2333946-015	OW-16D	Sulfate (as SO4)	14808-79-8	E235.SO4	510 mg/L	500 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1201898)										
WT2333946-017	OW-20D	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0205 mg/L	0.0196 mg/L	104	70.0	130	----
Dissolved Metals (QCLot: 1195974)										
WT2333946-002	OW-2S	Aluminum, dissolved	7429-90-5	E421	0.0994 mg/L	0.1 mg/L	99.4	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0508 mg/L	0.05 mg/L	102	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0632 mg/L	0.05 mg/L	126	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	0.0125 mg/L	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00532 mg/L	0.005 mg/L	106	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0419 mg/L	0.05 mg/L	83.8	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	0.05 mg/L	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00492 mg/L	0.005 mg/L	98.4	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	2.5 mg/L	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00266 mg/L	0.0025 mg/L	106	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0123 mg/L	0.0125 mg/L	98.4	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0118 mg/L	0.0125 mg/L	94.1	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0111 mg/L	0.0125 mg/L	88.8	70.0	130	----
		Iron, dissolved	7439-89-6	E421	ND mg/L	0.05 mg/L	ND	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0236 mg/L	0.025 mg/L	94.4	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0123 mg/L	0.0125 mg/L	98.7	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	2.5 mg/L	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	0.0125 mg/L	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0129 mg/L	0.0125 mg/L	103	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0224 mg/L	0.025 mg/L	89.8	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.648 mg/L	0.5 mg/L	130	70.0	130	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1195974) - continued										
WT2333946-002	OW-2S	Potassium, dissolved	7440-09-7	E421	ND mg/L	2.5 mg/L	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.00534 mg/L	0.005 mg/L	107	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.561 mg/L	0.5 mg/L	112	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	0.5 mg/L	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.0411 mg/L	0.05 mg/L	82.3	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	2.5 mg/L	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	0.0125 mg/L	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	2.5 mg/L	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00436 mg/L	0.005 mg/L	87.2	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0474 mg/L	0.05 mg/L	94.7	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00494 mg/L	0.005 mg/L	98.8	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0247 mg/L	0.025 mg/L	98.6	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0121 mg/L	0.0125 mg/L	96.6	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00495 mg/L	0.005 mg/L	99.0	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	0.00025 mg/L	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0257 mg/L	0.025 mg/L	103	70.0	130	----
Zinc, dissolved	7440-66-6	E421	0.0236 mg/L	0.025 mg/L	94.2	70.0	130	----		
Zirconium, dissolved	7440-67-7	E421	0.00518 mg/L	0.005 mg/L	104	70.0	130	----		
Dissolved Metals (QCLot: 1199837)										
WT2333946-008	OW-B	Aluminum, dissolved	7429-90-5	E423A	0.0968 mg/L	0.1 mg/L	96.8	70.0	130	----
		Antimony, dissolved	7440-36-0	E423A	0.0538 mg/L	0.05 mg/L	108	70.0	130	----
		Arsenic, dissolved	7440-38-2	E423A	0.0537 mg/L	0.05 mg/L	107	70.0	130	----
		Barium, dissolved	7440-39-3	E423A	ND mg/L	0.0125 mg/L	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E423A	0.00468 mg/L	0.005 mg/L	93.6	70.0	130	----
		Bismuth, dissolved	7440-69-9	E423A	0.0452 mg/L	0.05 mg/L	90.4	70.0	130	----
		Boron, dissolved	7440-42-8	E423A	ND mg/L	0.05 mg/L	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E423A	0.00509 mg/L	0.005 mg/L	102	70.0	130	----
		Calcium, dissolved	7440-70-2	E423A	ND mg/L	2.5 mg/L	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E423A	0.00272 mg/L	0.0025 mg/L	109	70.0	130	----
		Chromium, dissolved	7440-47-3	E423A	0.0129 mg/L	0.0125 mg/L	103	70.0	130	----
		Cobalt, dissolved	7440-48-4	E423A	0.0124 mg/L	0.0125 mg/L	99.0	70.0	130	----
		Copper, dissolved	7440-50-8	E423A	0.0116 mg/L	0.0125 mg/L	93.2	70.0	130	----
		Iron, dissolved	7439-89-6	E423A	0.052 mg/L	0.05 mg/L	103	70.0	130	----
		Lead, dissolved	7439-92-1	E423A	0.0235 mg/L	0.025 mg/L	93.9	70.0	130	----
		Lithium, dissolved	7439-93-2	E423A	0.0116 mg/L	0.0125 mg/L	93.2	70.0	130	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1199837) - continued										
WT2333946-008	OW-B	Magnesium, dissolved	7439-95-4	E423A	ND mg/L	2.5 mg/L	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E423A	0.0121 mg/L	0.0125 mg/L	97.0	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E423A	0.0133 mg/L	0.0125 mg/L	107	70.0	130	----
		Nickel, dissolved	7440-02-0	E423A	0.0240 mg/L	0.025 mg/L	96.2	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E423A	0.528 mg/L	0.5 mg/L	106	70.0	130	----
		Potassium, dissolved	7440-09-7	E423A	ND mg/L	2.5 mg/L	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E423A	0.00519 mg/L	0.005 mg/L	104	70.0	130	----
		Selenium, dissolved	7782-49-2	E423A	0.0551 mg/L	0.05 mg/L	110	70.0	130	----
		Silicon, dissolved	7440-21-3	E423A	ND mg/L	0.5 mg/L	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E423A	0.00487 mg/L	0.005 mg/L	97.4	70.0	130	----
		Sodium, dissolved	7440-23-5	E423A	ND mg/L	2.5 mg/L	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E423A	ND mg/L	0.0125 mg/L	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E423A	ND mg/L	2.5 mg/L	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E423A	0.00508 mg/L	0.005 mg/L	102	70.0	130	----
		Thallium, dissolved	7440-28-0	E423A	0.0470 mg/L	0.05 mg/L	94.1	70.0	130	----
		Thorium, dissolved	7440-29-1	E423A	0.00291 mg/L	0.005 mg/L	58.2	70.0	130	K
		Tin, dissolved	7440-31-5	E423A	0.0246 mg/L	0.025 mg/L	98.6	70.0	130	----
		Titanium, dissolved	7440-32-6	E423A	0.0127 mg/L	0.0125 mg/L	102	70.0	130	----
		Tungsten, dissolved	7440-33-7	E423A	0.00504 mg/L	0.005 mg/L	101	70.0	130	----
		Uranium, dissolved	7440-61-1	E423A	ND mg/L	0.00025 mg/L	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E423A	0.0264 mg/L	0.025 mg/L	106	70.0	130	----
		Zinc, dissolved	7440-66-6	E423A	0.0226 mg/L	0.025 mg/L	90.6	70.0	130	----
		Zirconium, dissolved	7440-67-7	E423A	0.00291 mg/L	0.005 mg/L	58.1	70.0	130	K

Qualifiers

Qualifier	Description
K	Matrix Spike recovery outside ALS DQO due to sample matrix effects.



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Chain of Custody (COC) / Analytical Request Form

COC Number: 20 - 887777

Page

Canada Toll Free: 1 800 668 9878

Environmental Division
Waterloo
Work Order Reference
WT2333946



Telephone : +1 519 886 6910

Report To Company: Bluewater Geoscience Contact: B. Lemieux Phone: Street: City/Province: Postal Code: Company address below will appear on the final report	Contact and company name below will appear on the final report Select Report Format: <input checked="" type="checkbox"/> PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Merge QC/QCI Reports with COA <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: Email 2: Email 3:	Turnaround Time (TAT) Requested <input checked="" type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum <input type="checkbox"/> 1 day [P1] if received by 3pm M-F - 100% rush surcharge minimum <input type="checkbox"/> Same day [E], if received by 10am M-S - 200% rush surcharge. Additional may apply to rush requests on weekends, statutory holidays and non-routine																																																
Invoice To Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Company: Contact: Project Information ALS Account # / Quote #: 66-850 Job #: PO / AFE: LSD:	Invoice Recipients Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: Email 2: Oil and Gas Required Fields (client use) AFE/Cost Center: Major/Minor Code: Requisitioner: Location: ALS Contact: GAYLE Sampler: BJL Date (dd-mm-yy): 15/10/23 Time (hh:mm)	Analysis Requir... Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below <table border="1"> <tr> <th>NUMBER OF CONTAINERS</th> <th>Gen-Chem. Pkg. 1</th> <th></th> <th>SAMPLES ON HOLD</th> </tr> <tr> <td>4</td> <td>↓</td> <td>↓</td> <td></td> </tr> <tr> <td></td> <td>↓</td> <td>↓</td> <td></td> </tr> <tr> <td></td> <td>↓</td> <td>↓</td> <td></td> </tr> <tr> <td></td> <td>↓</td> <td>↓</td> <td></td> </tr> <tr> <td></td> <td>↓</td> <td>↓</td> <td></td> </tr> <tr> <td></td> <td>↓</td> <td>↓</td> <td></td> </tr> <tr> <td></td> <td>↓</td> <td>↓</td> <td></td> </tr> <tr> <td></td> <td>↓</td> <td>↓</td> <td></td> </tr> <tr> <td></td> <td>↓</td> <td>↓</td> <td></td> </tr> <tr> <td></td> <td>↓</td> <td>↓</td> <td></td> </tr> <tr> <td></td> <td>↓</td> <td>↓</td> <td></td> </tr> </table>	NUMBER OF CONTAINERS	Gen-Chem. Pkg. 1		SAMPLES ON HOLD	4	↓	↓			↓	↓			↓	↓			↓	↓			↓	↓			↓	↓			↓	↓			↓	↓			↓	↓			↓	↓			↓	↓	
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Sample Identification and/or Coordinates (This description will appear on the report) OW-1 OW-2S OW-2D OW-3S OW-3D OW-4D OW-7D OW-7D OW-10B OW-10D OW-10D OW-12D	Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only) ODWS	SAMPLE RECEIPT DETAILS (ALS use only) Cooling Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input checked="" type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A INITIAL COOLER TEMPERATURES °C: 2.9 2.0 FINAL COOLER TEMPERATURES °C:																																																
Drinking Water (DW) Samples (client use) Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Are samples for human consumption/ use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO SHIPMENT RELEASE (client use) Released by: BJL Date: 027.19/23	INITIAL SHIPMENT RECEPTION (ALS use only) Received by: MT Date: 10/19/23	FINAL SHIPMENT RECEPTION (ALS use only) Received by: Date: 13:15																																																

REFUSE TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION
 Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.
 1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

6-15/ 11-342 111-001 CC-987 GC-989 JL

WHITE - LABORATORY COPY YELLOW - CLIENT COPY



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Report To Contact and company name below will appear on the final report Company: <u>Bluewater Geoscience</u> Contact: <u>B. LEMIEUX</u> Phone: _____ Company address below will appear on the final report Street: _____ City/Province: _____ Postal Code: _____		Reports / Recipients Select Report Format: <input checked="" type="checkbox"/> PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Merge COC/QCI Reports with COA <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: _____ Email 2: _____ Email 3: _____		Turnaround Time (TAT) Requested <input checked="" type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum <input type="checkbox"/> 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum <input type="checkbox"/> Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests		AFFIX ALS BARCODE LABEL HERE (ALS use only)	
Invoice To Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Copy of invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Invoice Recipients Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: _____ Email 2: _____		Date and Time Required for all E&P TATs: For all tests with rush TATs requested, please contact your AM to confirm availability.			
Company: Contact: _____		Project Information ALS Account # / Quote #: <u>DE-650</u> Job #: _____ PO / AFE: _____ LSD: _____		Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below			
ALS Lab Work Order # (ALS use only): <u>WJ233394678</u>		ALS Contact: <u>BOYLE</u>		Sampler: <u>BAL</u>			
Sample Identification and/or Coordinates (This description will appear on the report) <u>OW-135</u> <u>OW-13D</u> <u>OW-16S</u> <u>OW-16D</u> <u>OW-20S</u> <u>OW-20D</u>		Date (dd-mm-yy) <u>19/10/23</u>		Time (hh:mm) <u>GW</u>			
Sample Type <u>GW</u>		Number of Containers <u>1</u>		SAMPLES ON HOLD			
Drinking Water (DW) Samples (client use) Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only) <u>ODWS</u>		EXTENDED STORAGE REQUIRED			
Are samples for human consumption/ use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SHIPPING RELEASE (client use) Released by: <u>BL</u> Date: <u>09.19.23</u>		SAMPLE RECEIPT DETAILS (ALS use only) Cooling Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input checked="" type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A INITIAL COOLER TEMPERATURES °C: _____ FINAL COOLER TEMPERATURES °C: <u>2.9</u> <u>2.0</u>			
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 1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Denise Holmes

From: ca.office (MNRF) <ca.office@ontario.ca>
Sent: Friday, February 16, 2024 3:53 PM
To: ca.office (MNRF)
Cc: Keyes, Jennifer (MNRF)
Subject: Update: Regulation of Development for the Protection of People and Property from Natural Hazards in Ontario – Ministry of Natural Resources and Forestry and Extension of Minister's Fee Direction

This message is being sent on behalf of Jennifer Keyes, Director, Resources Planning and Development Policy Branch, MNRF

Good afternoon:

I am writing to inform you of recent updates under the *Conservation Authorities Act* (the act) regarding the regulation of development for the protection of people and property from natural hazards in Ontario. Amendments to the act that were made in recent years to update the conservation authorities permitting framework and associated regulations will come into effect on April 1, 2024. These changes will clarify and streamline regulatory requirements to focus on natural hazards and public safety and provide greater transparency in the permitting process.

Updated rules for the protection of people and property from natural hazards

Effective April 1, 2024, updated permitting related provisions of the act will come into effect, supported by a new Ontario Regulation (O. Reg.) 41/24: Prohibited Activities, Exemptions and Permits, which set out prohibited activities and areas where a conservation authority permit is required, exemptions for permits for certain low-risk activities, the process for applying for a conservation authority permit, and service requirements for conservation authorities in reviewing permit applications. The new rules will apply to all conservation authorities and replace the existing 36 conservation authority-specific regulations.

Key changes include:

- Updating some definitions and areas where development activities are prohibited, while maintaining important provincial standards.
- Requirements for mapping of regulated areas to be made available online and for public notification to be given of any changes.
- Exemptions from the requirement for a conservation authority permit for some low-risk activities, subject to certain conditions, such as sheds, removable docks, garage rebuilds, fencing, and agricultural drainage.
- Limiting the conditions that can be included on a permit to matters related to natural hazards and public safety and general permit administration.
- Service standards for permit issuance including pre-consultation and confirmation of complete applications within 21-days and requiring annual reporting on permitting statistics including reporting on the level of conservation authority compliance with new regulatory requirements.
- Enabling applicants to appeal to the Ontario Land Tribunal (OLT) if a permit decision is not made within 90-days and appeals of permitting fees charged by conservation authorities to the OLT.

- Enabling Minister of Natural Resources and Forestry's tools regarding the review of permit decisions and the issuance of permits.
- Updated enforcement powers and offence provisions under the act, including stop work orders and increased penalties.

A decision notice is now available at the Environmental Registry of Ontario, posting #019-2927: [Proposed updates to the regulation of development for the protection of people and property from natural hazards in Ontario](#).

Minister's Fee Direction

I would also like to notify you that the Minister has extended his Direction (through the issuance of a new Direction) to conservation authorities to not change any fees charged as part of their programs and services associated with planning, development, and permitting. This extended direction is in effect as of January 1, 2024, until December 31, 2024.

If you have any questions, please reach out to the Ministry of Natural Resources and Forestry at ca.office@ontario.ca.

Sincerely,

Jennifer Keyes
Director, Resources Planning and Development Policy Branch
Ministry of Natural Resources and Forestry
ca.office@ontario.ca

Please Note: As part of providing [accessible customer service](#), please let me know if you have any accommodation needs or require communication supports or alternate formats.

This electronic transmission, including any accompanying attachments, may contain information that is privileged or confidential and is intended only for the use of the recipient(s) named above. Any distribution, review, dissemination, or copying of the contents of this communication by anyone other than the intended recipient(s) is strictly prohibited. If you received this communication in error, please notify the sender immediately by return e-mail and permanently delete the copy you have received. Thank you.

To the council of the Township of Melancthon

Property Ownership

If property is owned in partnership, all partners must be listed. If property is owned by a corporation, list the corporation's name and the name and corporate position of the authorized officer. Only the owner(s) of the property may apply for the loan.

Ownership Type

Applicant Mailing Address and Primary Contact Information

Last Name <u>SRAN</u> <u>LOLL</u>		First Name <u>AJEET PAL</u> <u>AMANGEET</u>		Middle Initial
Unit Number	Street/Road Number	Street/Road Name		PO Box
City/Town	Province	Postal Code		
Telephone Number ext.	Cellphone Number (optional)	Email Address (optional)		

Location of Land to be Drained

Lot or Part Lot <u>BLK 35</u>	Concession <u>PL 332</u>	Geographic Township <u>MELANCTHON</u>		
Parcel Roll Number <u>22190000041120</u>	PIN <u>341580074</u>			
Civic Address				
Unit Number	Street/Road Number	Street/Road Name		PO Box
City/Town	Province	Postal Code		
<u>MELANCTHON</u>	<u>ON</u>	<u>L9V 2M8</u>		

Description of Drainage System

Please attach a sketch of the location of the land you are planning to drain.
A mapping tool is available at: www.ontario.ca/drainage

Approximate Length of Pipe Material <u>78950</u> ^(ft) /m	Area to be Drained <u>65</u> ^(acres) /ha	
Proposed Outlet <u>Grand River</u>	Anticipated Date of Commencement <u>May 6/24</u>	Anticipated Date of Completion <u>May 10/24</u>

Estimated Total Cost of Drainage System

Material	<u>56881.50</u>
Installation	<u>24725.00</u>
Inspection Fee	<u>200.00</u>
Other	<u>3750.00</u>
Total Cost	<u>85856.50</u>

Amount of Loan Requested*

* Must be a multiple of \$100 not exceeding 75% of total cost of drainage work.

Terms of Agreement

In making this application for a loan, I understand and agree to the following:

- a) The granting of the loan is conditional upon all work being conducted in accordance with the *Agricultural Tile Drainage Installation Act*;
- b) The approval or refusal of the application is at the discretion of council whose decision is final;
- c) I will be advised in writing of council's decision regarding the application;
- d) Should the loan application be approved, an inspector of drainage will complete an Inspection and Completion Certificate and submit it to council;
- e) Council shall levy and collect for the term of ten years, over and above all other rates upon the land in respect of which the loan is made, a special equal annual rate sufficient to discharge the principal and interest of the loan;
- f) The *Tile Drainage Act* sets out procedural matters which pertain to this application for a loan; and
- g) The sum of all loans issued to me, as an individual, or in my role in a partnership or corporation in this and any other municipality does not exceed \$50,000 for the period of April 1st to March 31st.

Signature of Owner(s)/Primary Contact

Date (yyyy/mm/dd)

Signature of O

24-02-22

Date (yyyy/mm/dd)

24-02-22

Notice of Collection of Personal Information

Any personal information collected on this form is collected under the authority of the *Tile Drainage Act*, R.S.O. 1990, c. T.8 and will be used for the purposes of administering the Act. Questions concerning the collection of personal information should be directed to:

where the form is addressed to a municipality (*municipality to complete*)

and where the form is addressed to a territory without municipal organization, the Drainage Coordinator, Ministry of Agriculture, Food and Rural Affairs, 1 Stone Rd W, Guelph ON N1G 4Y2, 519 826-3552.

Proposal

Page No.

of

Pages

D.L.G. Farm Drainage(2007) Ltd.
80 Concession Road 3 East
Tiny, Ontario
LoL 2To 705-633-0211

PROPOSAL SUBMITTED TO Ajeet Sran			PHONE	DATE Dec 27/23
STREET			JOB NAME	
CITY	PROVINCE	POSTAL CODE	JOB LOCATION	
ARCHITECT		DATE OF PLANS	JOB PHONE	

We hereby submit specifications and estimates for:

65 acres 40 ft spacing

Material 73750 ft² - 4" filter tubing @ .654 per ft = \$47937.50
5200 ft² - 6" filter tubing @ 1.72 per ft = 8944.00

Installation 73750 ft² - 4" filter tubing @ .300 per ft = \$22125.00
5200 ft² - 6" filter tubing @ .509 per ft = 2600.00

Fittings and outlet pipes 3750.00

\$ 85356.50
HST 11096.34

Total \$96452.84

We propose hereby to furnish material and labour - complete in accordance with above specifications, for the sum of:

dollars (\$ _____).

Payment to be made as follows:

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, windstorm and other necessary insurance. Our workers are fully covered by Worker's Compensation Insurance.

Authorized
Signature _____

Note: This proposal may be
withdrawn by us if not accepted within _____ days.

Acceptance of Proposal - The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Signature _____

Date of Acceptance: _____

Signature _____

This form is to be used to petition municipal council for a new drainage works under the Drainage Act. It is not to be used to request the improvement or modification of an existing drainage works under the Drainage Act.

To: The Council of the Corporation of the Township of Melancthon

The area of land described below requires drainage (provide a description of the properties or the portions of properties that require drainage improvements)

Pt. Lot 18, Concession 6 S.W.

Pt. Lot 19, Concession 6 S.W.

An outlet is required for recently installed tile drainage on both properties.

In accordance with section 9(2) of the Drainage Act, the description of the area requiring drainage will be confirmed or modified by an engineer at the on-site meeting.

As owners of land within the above described area requiring drainage, we hereby petition council under subsection 4(1) of the Drainage Act for a drainage works. In accordance with sections 10(4), 43 and 59(1) of the Drainage Act, if names are withdrawn from the petition to the point that it is no longer a valid petition, we acknowledge responsibility for costs.

Purpose of the Petition (To be completed by one of the petitioners. Please type/print)		
Contact Person (Last Name) Bauman	(First Name) Henry	Telephone Number [REDACTED] ext.

Address	
Road/Street Number [REDACTED]	Road/Street Name [REDACTED]

Location of Project			
Lot Pt. Lot 18 & 19	Concession 6 S.W.	Municipality Melancthon	Former Municipality (if applicable) N/A

What work do you require? (Check all appropriate boxes)

Construction of new open channel

Construction of new tile drain (Would like newly installed tile providing an outlet for Lot 18, Concession 6 S.W. incorporated under the Drainage Act)

Deepening or widening of existing watercourse (not currently a municipal drain)

Enclosure of existing watercourse (not currently a municipal drain)

Other (provide description ▼)

Need lower road crossing on the 7th Line S.W. plus downstream cleanout of the Martin Drainage Works as needed

Name of watercourse (if known)
N/A

Estimated length of project
325m plus open drain cleanout downstream of the road

General description of soils in the area
Loam

What is the purpose of the proposed work? (Check appropriate box)

Tile drainage only Surface water drainage only Both

Petition filed this 28th day of February, 2024

Name of Clerk (Last, first name) Holmes, Denise	Signature 
---	---

- Your municipal property tax bill will provide the property description and parcel roll number.
- In rural areas, the property description should be in the form of (part) lot and concession and civic address.
- In urban areas, the property description should be in the form of street address and lot and plan number if available.
- If you have more than two properties, please take copy(ies) of this page and continue to list them all.

Number 1	Property Description Pt. Lot 18, Concession 6 S.W.
--------------------	--

Ward or Geographic Township Melancthon	Parcel Roll Number 22-19-000-004-07950-0000
--	---

I hereby petition for drainage for the land described and acknowledge my financial obligations.

Ownership


Sole Ownership

Owner Name (Last, First Name) (Type/Print)	Signature	Date (yyyy/mm/dd)
--	-----------	-------------------

Partnership (Each partner in the ownership of the property must sign the petition form)

Owner Name (Last, First Name) (Type/Print)	Signature	Date (yyyy/mm/dd)

Corporation (The individual with authority to bind the corporation must sign the petition)

Name of Signing Officer (Last, First Name) (Type/Print) Norman Bauman	Signature 
Name of Corporation Riverview Mfg. Inc.	I have the authority to bind the Corporation.
Position Title President	Date (yyyy/mm/dd) 2024 02/26

Number 2	Property Description Pt. Lot 19, Concession 6 S.W.
--------------------	--

Ward or Geographic Township Melancthon	Parcel Roll Number 22-19-000-004-07800-0000
--	---

I hereby petition for drainage for the land described and acknowledge my financial obligations.

Ownership


Sole Ownership

Owner Name (Last, First Name) (Type/Print)	Signature	Date (yyyy/mm/dd)
--	-----------	-------------------

Partnership (Each partner in the ownership of the property must sign the petition form)

Owner Name (Last, First Name) (Type/Print)	Signature	Date (yyyy/mm/dd)

Corporation (The individual with authority to bind the corporation must sign the petition)

Name of Signing Officer (Last, First Name) (Type/Print) Henry Bauman	Signature 
Name of Corporation Pine River Inc.	I have the authority to bind the Corporation.
Position Title President	Date (yyyy/mm/dd) 2024/02/26

Check here if additional sheets are attached Clerk initial

Petitioners become financially responsible as soon as they sign a petition.

- Once the petition is accepted by council, an engineer is appointed to respond to the petition. *Drainage Act*, R.S.O. 1990, c. D. 17 subs. 8(1).
- After the meeting to consider the preliminary report, if the petition does not comply with section 4, the project is terminated and the original petitioners are responsible in equal shares for the costs. *Drainage Act*, R.S.O. 1990, c. D. 17 subs. 10(4).
- After the meeting to consider the final report, if the petition does not comply with section 4, the project is terminated and the original petitioners are responsible for the costs in shares proportional to their assessment in the engineer's report. *Drainage Act*, R.S.O. 1990, c. D. 17 s. 43.
- If the project proceeds to completion, a share of the cost of the project will be assessed to the involved properties in relation to the assessment schedule in the engineer's report, as amended on appeal. *Drainage Act*, R.S.O. 1990, c. D. 17 s. 61.

Notice of Collection of Personal Information

Any personal information collected on this form is collected under the authority of the *Drainage Act*, R.S.O. 1990, c. D.17 and will be used for the purposes of administering the Act. Questions concerning the collection of personal information should be directed to: where the form is addressed to a municipality (*municipality to complete*)

and where the form is addressed to a territory without municipal organization, the Drainage Coordinator, Ministry of Agriculture, Food and Rural Affairs, 1 Stone Rd W, Guelph ON N1G 4Y2, 519 826-3552.

8 SW

CON. 7 SW

CON. 6 SW

CON. 5 SW

LOT 20
LOT 19

LOT 18

LOT 17

LOT 16



4-077-00
CEDAR
STREAM INC.

4-078-00
PINE RIVER INC.

4-079-50
RIVERVIEW MFG. INC.

4-081-00
K. HOLMES

270_SIDEROAD

4-079-75
L. & J. MARIN

7th LINE SW

1928

4-110-00
J. AN

4-109-00
2312439
ONTARIO INC.

4-108-00
2312439
ONTARIO INC.

4-108-02
G. & M. FREY

1230

MARTIN DRAINAGE WORKS

604

336

158

Original Petition
Accepted by Council February 18, 2021

New 2024 Petitioners

FEBRUARY 2024
R.J. Burnside and Associates Limited

Be it resolved that: "Council accept the petition under Section 4 of the Drainage Act signed by Norman Bauman on behalf of Riverview Mfg. Inc. describing Pt. Lot 18, Concession 6 S.W. as requiring drainage and Henry Bauman on behalf of Pine River Inc. describing Pt. Lot 19, Concession 6 S.W. as requiring drainage and directs the Clerk to notify the petitioners and the Grand River Conservation Authority as required by Section 5 of the Drainage Act of its decision to proceed. Be it further resolved that Council appoint Tom Pridham, P. Eng., of R. J. Burnside & Associates Ltd. to prepare a report, plan and profile in accordance with Section 8 of the Drainage Act. The Engineer is directed pursuant to Section 8(4) of the Drainage Act, to combine the work with the report currently in progress for Ken Holmes, owner of Pt. Lot 17, Concession 6 S.W., as the areas requiring drainage are adjoining."



The Corporation of

THE TOWNSHIP OF MELANCTHON

157101 Highway 10, Melancthon, Ontario, L9V 2E6

MEMORANDUM TO COUNCIL

TO: MAYOR WHITE AND MEMBERS OF COUNCIL

FROM: DENISE B. HOLMES, AMCT, CAO/CLERK

**SUBJECT: COMMUNITY PEER REVIEW SELECTION AGREEMENT
BETWEEN NORTH DUFFERIN AGRICULTURE AND
COMMUNITY TASK FORCE, STRADA AGGREGATES INC. AND
TOWNSHIP OF MELANCTHON**

MEETING DATE: MARCH 21, 2024

Background

On June 20th, 2023, Strada Aggregates and the North Dufferin Agriculture and Community Task Force entered into a first-of-a-kind Agreement in Canada governing the relationship between a community advocacy organization and an aggregate producer seeking a quarry license. The Agreement, known as the Community Engagement Agreement, contains six Agreement Schedules, with one of them, Schedule B, dealing with the Community Peer Review Hiring Protocol.

On July 13, 2023, Carl Cosack, NDACT attended Council to officially ask Melancthon Township to reach out to WSP Golder to ask them to Peer Review studies pertaining to the noise, air quality and blast vibration. Mr. Cosack advised Council that in their search for Peer Reviewers they have run into problems trying to secure proposals to work on the files because most Peer Reviewers are more comfortable having a municipality reach out to them. Strada has agreed to fund all of the Peer Reviews so there would be no cost to the Township. Strada and NDACT have both agreed to use WSP Golder for this purpose. There was discussion amongst Council and Staff were then directed to obtain a legal opinion on this request and how the Township should proceed with this matter.

Staff reached out to its Solicitor, Stephen Christie, and his comments were reviewed at the August 10th, 2023 Council meeting. Mr. Christie recommended that some sort of an Agreement be entered into between Strada, NDACT and the Township outlining the Township's role and obligations and contractually confirming Strada's obligation to pay. It was also suggested that either Strada or NDACT have their legal Counsel prepare such an Agreement for the Township's consideration. Council concurred with Mr. Christie's recommendation and directed Staff to reach out to both Strada and NDACT

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with this information and this was done on August 16, 2023.

On January 22, 2024, NDACT emailed the Township a draft tri-party Agreement and this was sent to Mr. Christie for review and comment. Mr. Christie provided a red-lined agreement, with his changes, which in turn was provided to NDACT and Strada. On February 13, 2024, both NDACT and Strada agreed to all of the changes that were made. Both NDACT and Strada were then advised that this matter would be placed on the Agenda for the March 21, 2024 Council meeting for Councils consideration.

Attached to this Memo, is a By-law to enter into the Community Peer Review Selection Agreement between the North Dufferin Agriculture and Community Task Force, Strada Aggregates Inc. and the Township of Melancthon and it is recommended that Council adopt the By-law to enter into the Agreement.

THE CORPORATION OF THE TOWNSHIP OF MELANCTHON

BY-LAW NUMBER _____ - 2024

**BEING A BY-LAW TO AUTHORIZE THE SIGNING OF A
COMMUNITY PEER REVIEW SELECTION AGREEMENT BETWEEN
THE NORTH DUFFERIN AGRICULTURE AND COMMUNITY TASK
FORCE, THE CORPORATION OF THE TOWNSHIP OF MELANCTHON
AND STRADA AGGREGATES INC.**

WHEREAS Strada Aggregates Inc. and the North Dufferin Agriculture And Community Task Force are desirous of entering into an Agreement with the Corporation of the Township of Melancthon for assistance from the Township regarding the engagement of the Community Peer Review Process relating to Strada Aggregates Inc.'s Below the Water Table Aggregate Extraction License;

AND WHEREAS the Community Peer Review Selection Agreement will confirm the roles and responsibilities of each Party to the Agreement;

**NOW THEREFORE THE CORPORATION OF THE TOWNSHIP OF MELANCTHON
BY THE MUNICIPAL COUNCIL THEREOF ENACTS AS FOLLOWS:**

THAT the Mayor is hereby authorized and directed to sign the Community Peer Review Selection Agreement in substantially the same form as attached hereto as Schedule "A", between the North Dufferin Agriculture and Community Task Force, the Corporation of the Township of Melancthon and Strada Aggregates Inc.

BY-LAW READ A FIRST AND SECOND TIME THIS 21ST DAY OF MARCH, 2024.

BY-LAW READ A THIRD TIME AND PASSED THIS 21ST DAY OF MARCH, 2024.

MAYOR

CLERK

Community Peer Review Selection Agreement

THIS AGREEMENT

Is entered into in _____, Ontario on this ____ day of _____, 2024

BETWEEN

Strada Aggregates Inc. ("Strada"),
a Concord Ontario based aggregate developer and Ontario's largest aggregate recycler.

AND

North Dufferin Agricultural and Community Task Force, ("NDACT"),
a Dufferin County Community organization.

AND

Melancthon Township (referred to herein as "Melancthon" and as the "Municipality" from time to time),

a Municipality in Dufferin County where both Strada and NDACT operate.

Strada, NDACT and the Municipality are also collectively known as the "Parties" or individually as a "Party".

Background

Strada is undertaking the pre-application technical studies required to determine the feasibility of pursuing a below the water table aggregate extraction license on previously licensed land located at 437159 4th Line, in Melancthon, Ontario (the "Quarry").

Strada and NDACT have entered into a **Community Engagement Agreement** which among other requisites states certain qualified expert Community Peer Reviewers ("CPR") will be selected by NDACT but hired and funded by Strada to conduct pre-application peer reviews of the Hydrogeology, Noise, Air Quality and Blasting technical studies (the "Project")

NDACT selected the Hydrogeology CPR and Strada has hired and is funding the Hydrogeology CPR. NDACT reached out to certain Consulting Firms for their interest in the role of CPR for: Noise, Air Quality and Blasting. NDACT has had difficulty finding peer reviewers who are willing to work for a Community Organization.

NDACT then reached out to the Municipality to get the Municipality's assistance in securing the three remaining CPRs. The Municipality concurred with assisting in the matter but requested that a three-way Agreement be crafted to confirm the roles and responsibilities.

Community Peer Review Selection Agreement

NOW, THEREFORE, the Parties hereby agree as follows:

1. Roles and Responsibilities:

- 1.1. The Municipality's sole role pursuant to this Agreement is to provide an introduction of the Project to the candidate CPR on behalf of NDACT and to follow the processes set out in Schedule A hereto.
- 1.2. The Parties agree to the **Community Peer Review Selection Process** (Attached as Appendix A) to be contracted for selecting the CPR.
- 1.3. Strada agrees to pay for the selected CPR in an amount mutually agreed upon between Strada and the CPR prior to the commencement of the Project.

2. Payment:

- 2.1. The payment amount to the CPR shall be mutually agreed upon between Strada and the CPR.
- 2.2. The Parties agree that the payment for the CPR shall be made by Strada directly to the CPR upon receiving an invoice from the CPR.

3. Confidentiality:

- 3.1. The Parties acknowledge that during the Peer Review Selection process, confidential information may be shared between them.
- 3.2. The Parties agree to treat all confidential information received from each other as strictly confidential and not to disclose it to any third party without prior written consent, except as required by law.

4. Term and Termination:

- 4.1. This Agreement shall commence on the date first written above and shall continue until the completion of the Community Peer Review Selection Process, unless terminated earlier by mutual agreement or as provided herein.
- 4.2. Any Party may terminate this Agreement upon written notice to the other Parties in the event of a material breach of any provision of this Agreement by the other Party.
- 4.3. Notwithstanding any other provision of this Agreement, the Municipality may terminate its obligations and all participation under this Agreement at any time, for any reason, upon the giving of written notice to the other parties.

5. Indemnity, Governing Law, and Jurisdiction:

- 5.1. Strada and NDACT shall at all times indemnify, release and hold harmless the Municipality from and against any and all claims, demands, losses, costs, damages, actions, suits or proceedings, including by third parties, that arise out of, or are attributable to the Municipality's involvement as per this Agreement. This paragraph shall survive the termination or completion of this Agreement.
- 5.2. This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario, Canada.
- 5.3. Any disputes arising out of or in connection with this Agreement shall be subject to the exclusive jurisdiction of the courts of the Province of Ontario.

6. Entire Agreement:

Community Peer Review Selection Agreement

6.1. This Agreement and its Appendices constitutes the entire agreement between the Parties with respect to the subject matter hereof and supersedes all prior negotiations, understandings, and agreements, whether oral or written.

7. Notice:

Any notice, invoice or other writing required or permitted to be given pursuant to this Agreement (including notice of a change of address) shall be deemed to have been given if delivered personally to the party or to an officer of the applicable party or, if delivered by registered mail on the third (3rd) day after mailing. The address for service of each of the parties is as follows:

NDACT:

North Dufferin Agriculture and Community Task Force

678126 Centre Road
Mulmur, On L9V 0E6
Attention: Executive Director

Municipality:

The Corporation of the Township of Melancthon

57101 Highway 10,
Melancthon, ON L9V 2E6
Attention: Municipal Clerk

Strada:

Strada Aggregates Inc.

30 Floral Parkway
Concord, ON, L4K 4R1
Attention: Controller

Community Peer Review Selection Agreement

Please indicate your acceptance of the terms and conditions of this Agreement by signing below. This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

The Parties agree to the terms and conditions described in this Agreement and associated Schedules. Signed on this _____ day of _____, 2024.

Representative Name, Title, and Signature:

STRADA
Per: Grant Horan Controller

I have the authority to bind the corporation.

NDACT
Brian Bell Vice Chair

Melancthon
Per: Darren White Mayor

I have the authority to bind the corporation.

Community Peer Review Selection Agreement

APPENDIX A – The Community Peer Review Selection Process

1. NDACT will select a qualified Consulting Firm and present the Consulting Firm contact information to the Municipality.
2. The Municipality will reach out to the Consulting Firm to see if there is interest in engaging in the Project. The Municipality will provide the **Strada Peer Review Process** to the Consulting Firm for their review. (Included as Appendix B)
3. If there is interest from the Consulting Firm, the Municipality will provide the introduction of the Consulting Firm to NDACT. NDACT will meet to discuss the project and the role of CPR with the Consulting Firm. *If there is no interest, refer to step 1 – this loop back will be performed until a Consulting Firm is selected or the parties wish to terminate the process.*
4. If the Consulting firm agrees to the role of CPR, the CPR will provide NDACT with a proposal as outlined in the **Strada Peer Review Process** (Included as Appendix B). NDACT, upon agreement with the proposal, will then present the candidate CPR to Strada for consideration. *If there is no agreement, refer to step 1 – this loop back will be performed until NDACT agrees with the proposal or the parties wish to terminate the process.*
5. If Strada agrees to further pursue the candidate CPR, Strada will take the appropriate steps to negotiate with, engage and fund the CPR. *If Strada disagrees with the choice of candidate, refer to step 1 - this loop back will be performed until Strada agrees to hire the candidate CPR or the parties wish to terminate the process.*

Community Peer Review Selection Agreement

APPENDIX B – Strada Peer Review Process

The Peer Review Process

The following peer review process and deliverable requirements are proposed:

Stage 1

- Site visit including meeting to discuss data collection, methodologies, and applicable standards
- Submission of preliminary comments and observations
- One Meeting (virtual) for presentation of mining plan and technical discussions

Stage 2

- Review of draft technical studies
- Review of community input, questions, concerns, applicant's responses etc. (from website TBD)
- Provide preliminary comments and questions

Stage 3

- Meeting with Strada and/or NDACT as required to review any unresolved matters
- Review Strada responses to comments and questions

Stage 4

- Prepare the Peer Review Report (PRR)
- Conduct formal presentation of the PRR with Strada and NDACT
- Public release of the PRR

The peer review process is anticipated to occur in the first quarter of 2024 and conclude in the second quarter of 2024.

Proposal Requirements

In order to prepare necessary agreements and make funding arrangements the candidate CPR consultants are required to submit proposals outlining:

- Understanding of the project
- Qualifications and assigned personnel
- Disclosure of any potential conflicts of interest
- Commitment to the above process and timelines
- Fee proposal with cost estimates broken down by the stages noted above with hourly rates. The fees for the CPRs shall be in line with industry averages.

Proposals shall be submitted to: Grant Horan, Controller, Strada Aggregates Inc.

Proposals shall be received no later than:

The Municipality is under no obligation to accept or proceed with the peer review process. The submitted proposals are subject to review by NDACT and Strada.



The Corporation of

THE TOWNSHIP OF MELANCTHON

157101 Highway 10, Melancthon, Ontario, L9V 2E6

MEMO TO COUNCIL

TO: MAYOR WHITE AND MEMBERS OF COUNCIL

FROM: DENISE B. HOLMES, AMCT, CAO/CLERK

**SUBJECT: MOU BETWEEN THE COUNTY OF DUFFERIN AND
TOWNSHIP OF MELANCTHON FOR SHARED LAND USE
PLANNING**

MEETING DATE: MARCH 21, 2024

The Township entered into a Memorandum of Understanding with the County of Dufferin for shared planning services on December 1, 2022 through By-law No. 54-2022.

The purpose of this Memorandum of Understanding is to update the hours per week that the Township will receive planning services under Section 4.2 and to update Schedule A regarding the approved employee rates for reimbursement and to add a Junior Planner to the Schedule.

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THE CORPORATION OF THE TOWNSHIP OF MELANCTHON

BY-LAW NUMBER _____ - 2024

**BEING A BY-LAW TO AUTHORIZE THE SIGNING OF A
MEMORANDUM OF UNDERSTANDING BETWEEN THE
CORPORATION OF THE COUNTY OF DUFFERIN AND THE
CORPORATION OF THE TOWNSHIP OF MELANCTHON FOR
SHARED LAND USE PLANNING SERVICES**

**NOW THEREFORE THE CORPORATION OF THE TOWNSHIP OF MELANCTHON BY
THE MUNICIPAL COUNCIL THEREOF ENACTS AS FOLLOWS:**

1. **THAT** the Mayor and Clerk are hereby authorized and directed to sign the Memorandum of Understanding, in substantially the same form as the Memorandum of Understanding, attached hereto as Schedule "A", between the Corporation of the County of Dufferin and the Corporation of the Township of Melancthon for the purposes of shared Land Use Planning Services.

2. **AND THAT** By-law 54-2022 be hereby repealed.

BY-LAW READ A FIRST AND SECOND TIME THIS 21ST DAY OF MARCH, 2024.

BY-LAW READ A THIRD TIME AND PASSED THIS 21ST DAY OF MARCH, 2024.

MAYOR

CLERK

SHARED LAND USE PLANNING SERVICES

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is made the _____ day of _____ 2024

BETWEEN: **Corporation of the County of Dufferin (“County of Dufferin”)** of W. & M. Edelbrock Centre, 30 Centre Street, Orangeville, L9W 2X1;

AND **Corporation of the Township of Melancthon (“Melancthon”)** of 157101 Highway 10, Melancthon, L9V 2E6;

collectively known as the (“**Municipal Partners**”)

BACKGROUND

- A. Each of the Municipal Partners are local government authorities, with the Corporation of the County of Dufferin and the Corporation of the Township of Melancthon established under the *Municipal Act, 2001*.
- B. Each of the Municipal Partners is responsible for land use planning matters as established by the Province of Ontario.
- C. The Municipal Partners have taken actions to share land use planning staff.

D. **AND THE MUNICIPAL PARTNERS AGREE:**

1. **Definitions & Interpretation**

1.1 **Definitions**

- 1.1.1 **“Rate”** means the hourly rate paid by the Recipient Municipality to Host Municipality, for providing land use planning services based on a cost recovery model;
- 1.1.2 **“Billing Period”** means the quarterly periods of each financial year;
- 1.1.3 **“Host Municipality”** means **County of Dufferin**;

1.1.4 **“Recipient Municipality”** means **Township of Melancthon**;

1.1.5 **“Memorandum”** means this Memorandum of Understanding;

1.2 **Interpretation**

1.2.1 The Background set out above forms part of this Memorandum and the Municipal Partners agree that the Background is true and accurate.

1.2.2 Unless the contrary intention appears:

1.2.2.1 Words noting the singular shall include the plural and vice versa.

1.2.2.2 Reference to any Act, statute or regulation shall include any amendment currently in force at the relevant time and any Act of the Legislature, statute or regulation enacted or passed in substitution therefore.

1.2.2.3 Headings are for convenience of reference only and do not affect the interpretation or construction of this Memorandum.

1.2.2.4 A requirement in the MOU for liaison and consultation necessitates full and honest dialogue, encompassing the obligation, when deemed necessary and suitable, for complete divulgence of relevant information and material

2. **Term**

2.1 This Memorandum shall commence on **February 1, 2024** and continue in perpetuity until either Municipal Partner withdraws with 6 months' written notice to the other.

2.2 There will be a mandatory review of this Memorandum conducted on the 3rd year of each term of Council.

3. **Negotiate In Good Faith**

The Municipal Partners agree that they will cooperate with each other and at all times act in good faith and with the joint objective of successfully and expeditiously concluding and carrying out all of the arrangements and agreements contemplated in this Memorandum.

4. **The Municipal Partners Obligations**

The Municipal Partners agree that each of them shall have the following obligations in respect of **Shared Land Use Planning Services**;

4.1 **Host Municipality**

On behalf of the Municipal Partners, the Host Municipality agrees to;

4.1.1 **Land Use Planning Services**

4.1.1.1 Provide planning services through in-house Professional Planner(s), Junior Planner(s), and Planning Coordinator(s) to the Recipient Municipality totalling 21 hours per week, except when conflicting with, but not limited to: personal leave, professional development, emergency matters, and organizational obligations (e.g. department-wide retreat, staff committee, etc);

4.1.1.2 Additional hours (greater than 21 hrs per week) may be provided at the request of the Recipient Municipality, if there is capacity at the discretion of the Host Municipality, and written agreement of both parties;

4.1.1.3 Be responsible for all aspects of County Planning staff management;

4.1.2 **Finances**

4.1.2.1 Invoice the Recipient Municipality each billing period for actual services provided, based on hourly rates as outlined in Schedule A;

4.1.2.2 Maintain insurance related to the provision of services as outlined in this Memorandum, including such professional planning insurance as required by law and including general liability insurance for any services being provided remotely and to indemnify the Recipient Municipality;

4.1.3 **Administration**

4.1.3.1 Maintain a log of dates and times and summary of when services were provided to the Recipient Municipality;

4.2 **Recipient Municipality**

The Recipient Municipality agrees to:

4.2.1 **Assign Work**

- 4.2.1.1 Assign relevant work on a weekly basis to the Host Municipality's Planning Staff, specific to Melancthon, and within the scope of services offered as outlined in Schedule B, at a quantity that is reasonable to accomplish within 21 hours per week;
- 4.2.1.2 Provide to the Host Municipality in writing the contact information for the appointed staff person that will be responsible to assign work to the Professional Planner and Planning Coordinator;
- 4.2.1.3 Provide guidance, direction, and clarification to the Professional Planner and Planning Coordinator on work that has been assigned to them;

4.2.2 **Finances**

- 4.2.2.1 Pay invoices provided by the Host Municipality with 30 days of their issuance;
- 4.2.2.2 Maintain insurance related to the provision of services as outlined in this Memorandum and to indemnify the Host Municipality;
- 4.2.2.3 Reimburse the County for expenses incurred by County Planning staff, including mileage, at rates as outlined in Schedule A.

4.2.3 **Administration**

- 4.2.3.1 Provide Professional Planners and Planning Coordinator access to files, email systems, and other tools requires to perform their duties;
- 4.2.3.2 Maintain records and communications as it relates to services provided by the Professional Planner and Planning Coordinator (e.g. records of inquiries, official correspondence, draft planning documents) including all records and communications provided by the Professional Planners and Planning Coordinator. It is

understood that all such records and communications are deemed to be under the control and ownership of the Recipient Municipality

- 4.2.3.3 Maintains ownership and control of all records as it relates to services provided by the Professional Planner and Planning Coordinator (e.g. records of inquiries, official correspondence, draft planning documents);

4.3 **Withdrawal**

- 4.3.1 If a Member Municipality of this Memorandum wishes to no longer participate, that Council, through their Clerk or Chief Administrative Officer, may upon giving six (6) months written notice (the "Notice Period") to the other Municipal Partners withdraw from this Memorandum, thereby dissolving it;
- 4.3.2 Notwithstanding withdrawing from Shared Land Use Planning Services, that Municipal Partner shall still be liable for services provided and responsibilities surviving the Memorandum as outlined in Schedule B;

5. **No Partnership**

This Memorandum does not create or evidence of a partnership between the Municipal Partners nor does it fetter the legislative discretion of the Councils of the Municipal Partners in its consideration of any planning proposal that may be subject to planning services resulting from this Memorandum.

6. **Acknowledgement**

The Municipal Partners acknowledge and agree that each of the Municipal Partners may in its own right (a) provide services or (b) engage others for their services, however any costs incurred shall be borne solely by the respective Municipal Partner.

7. **Disputes Between Municipal Partners**

- 7.1 The Municipal Partners agree to work together in good faith to resolve any matter requiring their direction or resolution.
- 7.2 Where the Municipal Partners are unable to resolve a matter within twenty-one (21) days of the matter being presented to them, the matter will be referred to arbitration.

- 7.3 Notwithstanding Clause 7.2 the Municipal Partners agree to be bound by the decision of the appointed arbitrator (except in relation to any decision relating to the acquisition or disposal of any real property) and will endeavour to work together in good faith in the implementation of that decision.
- 7.4 The costs (if any) of arbitration shall be borne equally by the Municipal Partners involved in the arbitration.

EXECUTED as a Memorandum of Understanding

THE COMMON SEAL of **THE**)
CORPORATION OF THE COUNTY)
OF DUFFERIN was hereunto affixed)
in accordance with its Constitution)
and by the authority of its directors:

.....
Warden

.....
Clerk

THE COMMON SEAL of the)
CORPORATION OF THE)
TOWNSHIP OF MELANCTHON)
was hereunto affixed in accordance)
with its Constitution and by the)
authority of its directors:

.....
Mayor

.....
Clerk

Schedule A – Rates

The rate for mileage will be the same as the County approved rate employees are reimbursed for the period the claim is in.

The rate for a Senior Planner is \$82.78 per hour for 2024.

The rate for Junior Planner is \$73.59 per hour for 2024.

The rate for a Planning Coordinator is \$75.90 per hour for 2024.

Rates for subsequent years will be calculated in November, and will be based on the average cost per hour included in draft budget for the year commencing in the following January.

Schedule B – Responsibilities Surviving this Memorandum

The following are responsibilities that will survive this Memorandum:

- Municipal Partners must maintain insurance, records, and other appropriate measures to mitigate financial and legal liability arising from providing or receiving land use planning services through this Memorandum.
- The Recipient Municipality will compensate the Host Municipality for expenses incurred, including but not limited to staff time, as a result of being required to participate in Ontario Land Tribunal, legal proceedings, or arbitration arising from work performed by Host Municipal staff on behalf of the Recipient Municipality through this Memorandum.

Schedule C – List of Shared Land Use Planning Services

The following is a RASCI chart which outlines which staff position and what their agreed upon role is within the planning services within the Recipient Municipality. The planning services the Host Municipality provides include all the roles as outlined under the Planning Coordinator (“Plan Coord.”) and Planner columns. In this chart “ML” denotes the Recipient Municipality’s staff.

Melancthon	Task Description	Plan Coord.	Planner	ML CAO	ML AA
Initiate Application	Serve as the key point of contact on all planning matters email inquiries + phone calls	S	I	A	R
	Receive pre-consultation application, review to confirm completion (documentation and fees)	C	S, C	C	R, A
	Pre-consultation application circulate, Schedule meetings, and chair as required	R	S, C	C, I	A, C
	Consolidate application comments + required studies list for consideration by applicant	R	A	S	
	Receive planning application, review to confirm completion (documentation and fees)			A	R
	Notice of complete application and public notice the letter (issuing)	R		S	A
	Notice of complete application and public notice the letter processing (publication and distribution)	S		A	R
Process Application	Circulate planning applications to the review team in the municipality as well as the County's for comments	C	C	S, C, I	R
	Maintain records associated with circulation of applications and comments	S		A, I	R
	Review and provide planning comments = ZBL, MV, Permit Letters (municipal approvals), severance plans.	R	C	S	A
	Consolidate application comments for consideration by applicant	R	A	S	
	Staff recommendation council report + meeting presentation	R	A	S, C	
	Review and provide planning comments - local OPA SPA& draft plans-	S	R	C	A
	Staff Report to council		S	I	R
	Public (local council) meeting presentation	S	R	C, I	A
Close Application	for local OPA - prepare full package and send to county for adopting	R	A	C	S
	Notice of passing	S	C	A	R
	Bylaw Full Force and Effect			A	R

- Responsible: The person or people who are responsible for completing a task or making a decision.

- **Accountable:** The person who is ultimately answerable for the correct and thorough completion of the task or decision-making process.
- **Support:** Individuals or groups who assist in the completion of the task, providing resources, expertise, or other forms of support.
- **Consulted:** People whose input or expertise is sought before a decision or action is taken.
- **Informed:** Individuals or groups who need to be kept informed about the progress or outcome of a task or decision, but are not directly involved in its execution.

THE CORPORATION OF THE TOWNSHIP OF MELANCTHON

BY-LAW NUMBER -2024

BEING A BY-LAW TO ADOPT THE ESTIMATES OF ALL SUMS REQUIRED DURING THE YEAR AND TO STRIKE THE RATES OF TAXATION, AND TO FURTHER PROVIDE FOR PENALTY AND INTEREST IN DEFAULT OF PAYMENT THEREOF FOR THE YEAR 2024

WHEREAS the Council of the Corporation of the Township of Melancthon has, in accordance with the Municipal Act, 2001, S.O. 2001, Chapter 25 as amended, Section 290 (1)(2)(3)(4) and Section 291 (1) considered the estimates of the Municipality for the year 2024;

AND WHEREAS pursuant to the County of Dufferin By-law the County of Dufferin set tax ratios and to set tax rate reductions for prescribed property subclasses for county purposes and lower tier municipal purposes;

AND WHEREAS the tax ratios established the relative amount of taxation to be borne by each property class and have been set for the taxation year 2024 under the authority of the Municipal Act, 2001, S.O. 2001, Chapter 25 Section 308(5) as follows:

Residential Class is	1.0000
Multi-residential Class is	1.7000
New Multi-Residential	1.1000
Commercial Class is	1.2200
Industrial Class is	2.1984
Landfill Class is	1.1815
Pipeline Class is	0.8421
Farmland Class is	0.2200
Managed Forest Class is	0.2500

AND WHEREAS all property assessment rolls on which the 2024 taxes are to be levied have been returned and revised pursuant to the provision of the Assessment Act, R.S.O. 1990, c.A.31, as amended (hereinafter referred to as the "Assessment Act") subject to appeals at present before the Assessment Review Board, the Ontario Municipal Board and the District Court;

AND WHEREAS the "Residential/Farm Assessment", "Multi-Residential Assessment", "Commercial Assessment", "Industrial Assessment", "Pipeline Assessment", "Farmlands Assessment" and "Managed Forests Assessment" and the applicable subclasses pursuant to Section 7 of the Assessment Act, as amended by the Fair Municipal Finance Act, 1997 and Regulations thereto, have been determined on the basis of the aforementioned property assessment rolls and are detailed on Schedule "A" attached hereto and which forms part hereof;

AND WHEREAS the Province of Ontario has regulated all education tax rates for 2024; and hereby adopted to be applied against the whole of the assessment for real property.

AND WHEREAS the Treasurer shall add all or any arrears for special charges such as developer charges; fees regarding registered tax properties; service charges for cutting weeds, dog licensing fees and drain maintenance arrears pursuant to any statute or by-law to the respective properties chargeable thereto and that the same shall be collected by the collector in the manner as all other rates or levies.

NOW THEREFORE the Council of the Corporation of the Township of Melancthon enacts as follows:

THAT the Corporation of the Township of Melancthon adopt the sum of Three Million, Three hundred and Four Thousand, Two Hundred and Sixteen Dollars (\$3,304,216.00) as detailed in Schedule "B" attached hereto and which forms part hereof as the estimate of the Property Tax Levy required during the year 2024 for general purposes of the Corporation of the Township of Melancthon.

THAT for the year 2024 in the Corporation of the Township of Melancthon, the lower tier municipalities shall levy upon Residential/Farm Assessment, Multi-Residential Assessment, Commercial Assessment, Industrial Assessment, Pipeline Assessment, Farmlands Assessment and

Managed Forests Assessment and applicable subclasses the tax rates for Township purposes set out in Schedule "C" attached hereto and which forms part hereof.

THAT tax rates for the Township of Melancthon portion of the tax bill are hereby adopted to be applied against the whole of the assessment for real property as set out in Schedule "D".

1. The taxes shall become due and payable in two instalments:

First installment due and payable on August 20, 2024

Second installment due and payable on November 19, 2024

2. A penalty at the rate of 1.25% will be charged on the first day of default and on the first day of each calendar month thereafter in which default continues, on all unpaid instalments of taxes until December 31, 2024 after which the interest rates of 1.25% per month for each month or fraction thereof will be added.
3. The Treasurer may mail or cause the same to be mailed to the resident or place of business of such person indicated on the last revised assessment roll, a written or printed notice specifying the amount of taxes payable.
4. The taxes are payable at the Municipal Office, 157101 Highway 10, Melancthon, Ontario, L9V 2E6, the Toronto Dominion Bank or Credit Union in Shelburne, the CIBC or Credit Union in Dundalk, by mail, or by telephone/internet banking and by direct debit but not credit card.
5. In the event that the Provincial OPTA system does not have the necessary data to provide on Commercial, Industrial and Multi-Residential tax capping to permit processing tax bills for these installment dates, then the Treasurer is authorized to process tax bills for the remaining tax classes and to establish later tax installment due date(s) for the Commercial, Industrial and Multi-Residential tax classes on a separate bill.

This by-law shall come into force and effect upon the date of the final reading thereof.

By-law read a first and second time this 21st day of March, 2024.

By-law read a third time and passed this 21st day of March, 2024.

Mayor

Clerk

SCHEDULE A to BY-LAW -2024

TOWNSHIP OF MELANCTHON

2024 TAX RATES & LEVIES



TOWNSHIP OF MELANCTHON

Property Class	Tax Class	Township of Melancthon	County of Dufferin	Provincial Education	2024 Total	2024	Township of Melancthon	County of Dufferin	Education	Total Tax Levy
		Tax Rates	Tax Rates	Tax Rates	Tax Rates	CVA	Tax Levy	Tax Levy	Tax Levy	
Residential	RT	0.532752%	0.400024%	0.153000%	1.085776%	\$446,488,800.00	\$2,378,679.35	\$1,786,062.36	\$683,127.86	\$4,847,869.57
Residential Payment In Lieu	RH	0.532752%	0.400024%	0.153000%	1.085776%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Commercial Full (Occupied)	CT	0.649958%	0.488029%	0.880000%	2.017987%	\$10,984,800.00	\$71,396.57	\$53,609.04	\$96,666.24	\$221,671.85
Commercial Vacant Land	CU	0.649958%	0.488029%	0.880000%	2.017987%	\$393,200.00	\$2,555.63	\$1,918.93	\$3,460.16	\$7,934.73
Commercial Excess Land	CX	0.649958%	0.488029%	0.880000%	2.017987%	\$68,000.00	\$441.97	\$331.86	\$598.40	\$1,372.23
Commercial New Const. Full	XT	0.649958%	0.488029%	0.880000%	2.017987%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Commercial New Const. Excess Land	XU	0.454970%	0.341620%	0.880000%	1.676591%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Industrial (Occupied)	IT	1.171203%	0.879413%	0.880000%	2.930615%	\$45,603,800.00	\$534,112.92	\$401,045.64	\$401,313.44	\$1,336,471.99
Industrial Excess Land	IX	1.171203%	0.879413%	0.880000%	2.930615%	\$141,000.00	\$1,651.40	\$1,239.97	\$1,240.80	\$4,132.17
Industrial New Const. Full	IH	1.171203%	0.879413%	0.880000%	2.930615%	\$117,000.00	\$1,370.31	\$1,028.91	\$1,029.60	\$3,428.82
Industrial New Const. Excess Land	JU	1.171203%	0.615589%	0.880000%	2.666792%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Large Industrial Excess Land	LU	0.819853%	0.615589%	0.880000%	2.315441%	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Pipeline	PT	0.448631%	0.336860%	0.856022%	1.641513%	\$1,941,000.00	\$8,707.92	\$6,538.46	\$16,615.39	\$31,861.77
Farmlands	FT	0.117206%	0.088005%	0.038250%	0.243461%	\$257,446,226.00	\$301,741.15	\$226,566.27	\$98,473.18	\$626,780.61
Managed Forest	TT	0.133188%	0.100006%	0.038250%	0.271444%	\$2,672,000.00	\$3,558.79	\$2,672.16	\$1,022.04	\$7,252.99
TOTAL AMOUNTS TO BE RAISED						\$765,855,826.00	\$3,304,216.00	\$2,481,013.60	\$1,303,547.11	\$7,088,776.71



TOWNSHIP OF MELANCTHON 2024 DRAFT BUDGET

BUDGET PAGE	DEPARTMENT EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
GENERAL GOVERNMENT SERVICES				
4	COUNCIL	\$ 117,540.00	\$ 110,214.39	\$ 120,387.00
5	ADMINISTRATION	\$ 696,192.00	\$ 725,628.49	\$ 919,397.00
5	TAXATION WRITE OFFS	\$ 35,000.00	\$ 48,703.00	\$ 50,000.00
		\$ 848,732.00	\$ 884,545.88	\$ 1,089,784.00
PROTECTION TO PERSONAL & PROPERTY				
6	FIRE SERVICES	\$ 364,169.00	\$ 364,169.00	\$ 417,686.00
6	POLICING	\$ 447,718.00	\$ 442,670.00	\$ 488,370.00
6	BYLAW ENFORCEMENT	\$ 12,000.00	\$ 28,000.00	\$ 32,000.00
6	CONSERVATION AUTHORITY	\$ 34,800.00	\$ 34,800.00	\$ 36,016.00
6	ANIMAL CONTROL	\$ 11,200.00	\$ 8,934.00	\$ 11,500.00
6	STREET LIGHTS	\$ 6,000.00	\$ 4,653.00	\$ 6,500.00
		\$ 875,887.00	\$ 883,226.00	\$ 992,072.00
TRANSPORTATION SERVICES				
7	SALARIES & ADMINISTRATION	\$ 566,820.00	\$ 599,378.83	\$ 715,300.00
7	ROAD DEPARTMENT BUILDING & MISC.	\$ 189,300.00	\$ 163,862.00	\$ 202,942.00
8	ROAD EQUIPMENT	\$ 320,000.00	\$ 303,720.00	\$ 416,444.20
8	NEW EQUIPMENT	\$ 822,000.00	\$ 443,027.00	\$ 150,000.00
9	BRIDGES, CULVERTS, DRAINS	\$ 173,907.00	\$ 110,013.00	\$ 310,907.00
9	ROADSIDE	\$ 45,175.00	\$ 29,617.00	\$ 21,700.00
9	HARDTOP	\$ 48,500.00	\$ 32,652.00	\$ 49,500.00
9	LOOSETOP	\$ 602,000.00	\$ 732,398.00	\$ 602,000.00
10	WINTER CONTROL	\$ 55,000.00	\$ 63,011.00	\$ 70,000.00
10	ROAD IMPROVEMENTS	\$ 900,000.00	\$ 796,608.00	\$ 375,000.00
10	RESERVES	\$ 150,000.00	\$ 150,000.00	\$ 270,000.00
10	BUILDING IMPROVEMENTS	\$ -	\$ -	\$ -
		\$ 3,872,702.00	\$ 3,424,286.83	\$ 3,183,793.20

BUDGET PAGE	DEPARTMENT EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
11	ENVIRONMENTAL SERVICES	\$ 33,918.00	\$ 18,169.00	\$ 33,918.00
		\$ 33,918.00	\$ 18,169.00	\$ 33,918.00
11	RECREATION	\$ 158,273.00	\$ 213,994.00	\$ 129,700.00
		\$ 158,273.00	\$ 213,994.00	\$ 129,700.00
11	HEALTH & SOCIAL SERVICES (CEMETERY)	\$ 5,000.00	\$ -	\$ 5,000.00
		\$ 5,000.00	\$ -	\$ 5,000.00
11	LIBRARY	\$ 70,915.00	\$ 70,996.00	\$ 69,490.00
		\$ 70,915.00	\$ 70,996.00	\$ 69,490.00
12	PLANNING	\$ 150,000.00	\$ 38,285.00	\$ 200,000.00
		\$ 150,000.00	\$ 38,285.00	\$ 200,000.00
12	DRAINAGE	\$ 55,000.00	\$ 28,365.00	\$ 55,000.00
		\$ 55,000.00	\$ 28,365.00	\$ 55,000.00
12	RESERVES	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -
12	SUBTOTAL EXPENSES	\$ 6,070,427.00	\$ 5,561,867.71	\$ 5,758,757.20

BUDGET PAGE	DEPARTMENT REVENUE SUMMARY	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
13	TAXATION			
	SUPPLEMENTALS	\$ 85,000.00	\$ 87,652.00	\$ 90,000.00
	GRANT IN LIEU	\$ 1,950.00	\$ 2,015.00	\$ 2,050.00
		\$ 86,950.00	\$ 89,667.00	\$ 92,050.00
13	GRANTS	\$ 427,082.00	\$ 398,174.00	\$ 406,590.00
		\$ 427,082.00	\$ 398,174.00	\$ 406,590.00
13	ADMINISTRATION	\$ 25,870.00	\$ 25,172.00	\$ 93,664.20
		\$ 25,870.00	\$ 25,172.00	\$ 93,664.20
14	PROTECTIONS TO PERSONS & PROPERTY	\$ 5,000.00	\$ 5,920.00	\$ 5,500.00
		\$ 5,000.00	\$ 5,920.00	\$ 5,500.00
14	ROADS	\$ 1,501,442.00	\$ 1,157,299.00	\$ 902,137.00
		\$ 1,501,442.00	\$ 1,157,299.00	\$ 902,137.00
14	PLANNING	\$ 53,500.00	\$ 34,983.00	\$ 57,450.00
		\$ 53,500.00	\$ 34,983.00	\$ 57,450.00
15	OTHER	\$ 876,150.00	\$ 927,611.42	\$ 897,150.00
		\$ 876,150.00	\$ 927,611.42	\$ 897,150.00
15	SUBTOTAL REVENUE	\$ 2,975,994.00	\$ 2,638,826.42	\$ 2,454,541.20

GL ACCT # 5001	COUNCIL EXPENDITURES EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
1010	SALARIES, MEETINGS	\$ 96,140.00	\$ 95,291.00	\$ 99,505.00
1025	RECEIVER GENERAL	\$ 4,450.00	\$ 4,630.00	\$ 4,840.00
1030	EHT	\$ 1,850.00	\$ 1,858.00	\$ 1,942.00
1070	MILEAGE	\$ 1,000.00	\$ 126.00	\$ 1,000.00
1080	CONFERENCES/CONVENTIONS/SEMINARS/TRAINING	\$ 7,500.00	\$ 5,310.39	\$ 9,500.00
1090	MEALS	\$ 600.00	\$ 232.00	\$ 600.00
2190	MISCELLANEOUS/HYBRID COUNCIL	\$ 6,000.00	\$ 2,767.00	\$ 3,000.00
	TOTAL COUNCIL EXPENDITURES	\$ 117,540.00	\$ 110,214.39	\$ 120,387.00

GL ACCT # 5002	ADMINISTRATION EXPENDITURES EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
1010	WAGES, VACATION PAY, UNUSED SICK PAY	\$ 320,360.00	\$ 317,712.95	\$ 379,180.00
1020	BENEFITS	\$ 32,000.00	\$ 29,101.99	\$ 32,000.00
1022	TRAINING	\$ 1,500.00	\$ 1,912.60	\$ 2,000.00
1025	RECEIVER GENERAL	\$ 18,720.00	\$ 18,518.13	\$ 21,100.00
1026	MEETINGS	\$ 1,000.00	\$ 81.66	\$ 1,000.00
1030	EHT	\$ 6,240.00	\$ 6,222.53	\$ 8,980.00
1040	WSIB	\$ 8,840.00	\$ 90,000.00	\$ 13,123.00
1064	OMERS TOWNSHIP	\$ 34,300.00	\$ 32,688.56	\$ 44,172.00
1070	MILEAGE	\$ 1,500.00	\$ 483.00	\$ 1,500.00
1080	CONFERENCES	\$ 4,000.00	\$ 2,556.73	\$ 4,000.00
2025	OFFICE FURNITURE	\$ 1,200.00	\$ 376.71	\$ 5,000.00
2010	OFFICE SUPPLIES	\$ 6,800.00	\$ 8,170.00	\$ 8,000.00
2020	POSTAGE	\$ 7,000.00	\$ 5,853.44	\$ 6,000.00
2030	OFFICE EQUIPMENT	\$ 4,500.00	\$ 3,944.88	\$ 4,500.00
2035	COMPUTER PROGRAM UPDATES & IT SERVICES	\$ 23,500.00	\$ 23,500.00	\$ 32,500.00
2036	COMPUTERS & SERVER	\$ 500.00		\$ 30,500.00
2037	ESRI LICENSE AGREEMENT	\$ 3,100.00	\$ 2,605.00	\$ 3,100.00
2040	ADVERTISING	\$ 1,500.00	\$ 358.00	\$ 1,500.00
2050	AUDIT	\$ 24,000.00	\$ 22,436.00	\$ 24,000.00
2060	MEMBERSHIPS	\$ 4,000.00	\$ 3,878.00	\$ 4,000.00
2070	HEATING	\$ 3,400.00	\$ 3,400.00	\$ 3,700.00
2080	HYDRO	\$ 5,300.00	\$ 5,300.00	\$ 5,500.00
2090	TELEPHONE	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00
2094	INTERNET	\$ 1,800.00	\$ 2,480.00	\$ 2,500.00
2095	WEBSITE MAINTENANCE	\$ 500.00	\$ 264.00	\$ 500.00

GL ACCT # 5002	ADMINISTRATION EXPENDITURES EXPENDITURES (CONTINUED)	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
	STRATEGIC PLAN	\$ 30,000.00	\$ -	\$ 30,000.00
2100	PROFESSIONAL FEES - LEGAL	\$ 25,000.00	\$ 22,242.31	\$ 25,000.00
2102	INTEGRITY COMMISSIONER SERVICES	\$ 3,000.00	\$ 662.00	\$ 3,000.00
2103	HEALTH AND SAFETY SERVICES	\$ 4,700.00	\$ 20.00	\$ 6,022.00
2107	DEVELOPMENT CHARGE STUDY			\$ 27,000.00
	RISK ASSESSMENT STUDY			\$ 17,000.00
	ASSET RETIREMENT STUDY			\$ 10,000.00
	ASSET MANAGEMENT PLAN & FINANCIAL REPORTING			\$ 46,300.00
2109	EMPLOYEE TOWNSHIP COMPENSATION PLAN	\$ 15,000.00	\$ 15,264.00	\$ -
2110	INSURANCE	\$ 52,000.00	\$ 57,000.00	\$ 64,000.00
2120	ELECTION	\$ -		
2162	BLDG MAINTENANCE	\$ 8,000.00	\$ 5,050.00	\$ 6,000.00
2163	OFFICE CLEANING	\$ 2,400.00	\$ 2,239.00	\$ 3,664.00
2164	LANDSCAPING & GRASS CUTTING	\$ 300.00		\$ 300.00
2165	WATER SAMPLING	\$ 125.00	\$ 82.00	\$ 125.00
2190	OTHER/MISCELLANEOUS	\$ 4,000.00	\$ 3,845.00	\$ 4,000.00
2200	PETTY CASH	\$ 500.00	\$ 200.00	\$ 500.00
4030	BANK CHARGES	\$ 1,300.00	\$ 1,350.00	\$ 1,800.00
6135	GRANT TO OTHERS	\$ 3,750.00	\$ 3,250.00	\$ 3,750.00
6133	DONATION TO MARKDALE HOSPITAL (5YRS)	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00
6136	ERSKINE CLINIC	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00
7011	LOAN FOR MUNICIPAL EXPANSION	\$ 13,057.00	\$ 13,057.00	\$ 13,057.00
	TOTAL	\$ 696,192.00	\$ 725,628.49	\$ 919,397.00
4010	TOTAL TAX WRITE OFF EXPENDITURES	\$ 35,000.00	\$ 48,703.00	\$ 50,000.00
	TOTAL ADMINISTRATION EXPENDITURES	\$ 848,732.00	\$ 884,545.88	\$ 1,089,784.00

GL ACCT #	PROTECTION TO PERSONS/PROPERTY EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
	FIRE SERVICES			
3 6010	MULMUR MELANCTHON FD	\$ 127,070.00	\$ 127,070.00	\$ 152,494.00
3 6020	SHELBURNE AND DISTRICT FD	\$ 167,099.00	\$ 167,099.00	\$ 190,192.00
3 6030	TOWNSHIP OF SOUTHGATE FD - OPER/CAP	\$ 70,000.00	\$ 70,000.00	\$ 75,000.00
	SUB TOTAL	\$ 364,169.00	\$ 364,169.00	\$ 417,686.00
	POLICING			
4 3050	POLICING	\$ 435,468.00	\$ 435,468.00	\$ 452,154.00
4 3055	POLICING - ESO	\$ 350.00	\$ 360.00	\$ 3,408.00
4 3052	POLICING - RIDE	\$ 6,600.00	\$ 6,742.00	\$ 27,508.00
4 3053	POLICE SERVICES BOARD	\$ 300.00	\$ 100.00	\$ 300.00
4 2310	TASK FORCE	\$ 5,000.00	\$ -	\$ 5,000.00
	SUB TOTAL	\$ 447,718.00	\$ 442,670.00	\$ 488,370.00
	BY LAW ENFORCEMENT			
4 6155	BY LAW ENFORCEMENT	\$ 12,000.00	\$ 28,000.00	\$ 32,000.00
	CONSERVATION AREA			
4 6040	NOTTAWASAGA VALLEY CA	\$ 13,745.00	\$ 13,745.00	\$ 14,226.00
4 6050	GRAND RIVER CA	\$ 21,055.00	\$ 21,055.00	\$ 21,790.00
	SUB TOTAL	\$ 34,800.00	\$ 34,800.00	\$ 36,016.00
	ANIMAL CONTROL			
13 6140	LIVESTOCK CLAIMS	\$ 4,000.00	\$ 1,014.00	\$ 4,000.00
4 6150	ANIMAL CONTROL	\$ 7,200.00	\$ 7,920.00	\$ 7,500.00
	SUB TOTAL	\$ 11,200.00	\$ 8,934.00	\$ 11,500.00
	STREET LIGHTS			
6 3025	STREET LIGHTS LED	\$ 5,000.00	\$ 4,653.00	\$ 5,500.00
6 3026	STREET LIGHT REPAIR	\$ 1,000.00	\$ -	\$ 1,000.00
	SUB TOTAL	\$ 6,000.00	\$ 4,653.00	\$ 6,500.00
	TOTAL PROTECTION TO PERSONS/PROPERTY	\$ 875,887.00	\$ 883,226.00	\$ 992,072.00

GL ACCT # 5005	ROADWAYS EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
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SALARIES & ADMINISTRATION				
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1010	SALARIES AND WAGES	\$ 421,200.00	\$ 452,681.90	\$ 542,420.00
1025	RECEIVER GENERAL, EHT & WSIB	\$ 45,760.00	\$ 52,690.00	\$ 70,610.00
1020	BENEFITS	\$ 28,000.00	\$ 28,195.00	\$ 34,000.00
1065	OMERS TOWNSHIP CONTRIBUTION	\$ 37,960.00	\$ 37,535.93	\$ 41,670.00
1070	MILEAGE	\$ 100.00	\$ 12.00	\$ 100.00
1022	STAFF TRAINING AND SEMINARS	\$ 4,000.00	\$ 2,954.00	\$ 7,500.00
2010	OFFICE SUPPLIES/COMPUTOR	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00
2036	GPS MONTHLY TRACKING EXPENSE	\$ 5,500.00	\$ 3,385.00	\$ 5,000.00
2112	ASSET MANAGEMENT PLAN SUPPORT	\$ 6,000.00	\$ 13,311.00	\$ 12,000.00
2112	ASSET MANAGEMENT PLAN UPDATE	\$ -		
3105	BRIDGE STUDY/INSPECTIONS	\$ 16,300.00	\$ 6,614.00	\$ -
TOTAL		\$ 566,820.00	\$ 599,378.83	\$ 715,300.00

ROAD DEPARTMENT BUILDING MISC.				
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2070	UTILITIES - HEAT	\$ 16,000.00	\$ 11,586.00	\$ 16,000.00
2080	UTILITIES - HYDRO	\$ 7,000.00	\$ 8,000.00	\$ 8,200.00
2090	TELEPHONE	\$ 1,200.00	\$ 1,142.00	\$ 1,200.00
2091	MOBILE PHONE	\$ 1,500.00	\$ 674.00	\$ 700.00
2040	ADVERTISING	\$ 750.00		\$ 750.00
2041	SIGNS	\$ 6,000.00	\$ 5,800.00	\$ 6,000.00
2110	INSURANCE	\$ 70,000.00	\$ 82,100.00	\$ 92,220.00
2100	LEGAL FEES	\$ 20,000.00	\$ 12,000.00	\$ 20,000.00
2050	AUDIT	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00
2060	MEMBERSHIPS	\$ 150.00	\$ 113.00	\$ 150.00
2165	MATERIALS AND SUPPLIES/STOCK	\$ 7,000.00	\$ 6,762.00	\$ 9,000.00
2166	COVERALLS	\$ 6,000.00	\$ 5,756.00	\$ 4,000.00
3000	SERVICES AND RENTS/MISC	\$ 7,500.00	\$ 2,207.00	\$ 7,500.00
2103	HEALTH & SAFETY SERVICES	\$ 5,000.00	\$ 5,000.00	\$ 6,022.00
2104	HEALTH & SAFETY SERVICES/SUPPLIES	\$ 1,000.00	\$ 1,100.00	\$ 1,000.00
2162	BUILDING MAINTENANCE	\$ 20,000.00	\$ 5,600.00	\$ 10,000.00
2163	SAND DOME REPAIRS			
2185	OIL SEPARATER	\$ 2,200.00	\$ -	\$ 2,200.00
2192	SHOP TOOLS	\$ 5,000.00	\$ 4,022.00	\$ 5,000.00
2190	MISCELLANEOUS	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00
3800	CONTRACT WORK	\$ 1,000.00		\$ 1,000.00
TOTAL		\$ 189,300.00	\$ 163,862.00	\$ 202,942.00

GL ACCT # 5005	ROADWAYS EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
ROAD EQUIPMENT				
2150	FUEL - CLEAR	\$ 70,000.00	\$ 76,000.00	\$ 74,000.00
2155	FUEL - DYED	\$ 65,000.00	\$ 60,000.00	\$ 65,000.00
3070/3072	FUEL - PATROL TRUCKS	\$ 18,000.00	\$ 17,780.00	\$ 20,000.00
2180	OIL - TRUCKS AND GRADER	\$ 5,000.00	\$ 2,300.00	\$ 5,000.00
3071	TR # 1 - REPAIRS	\$ 5,000.00	\$ 3,100.00	\$ 5,000.00
3073	TR # 2 - REPAIRS	\$ 15,000.00	\$ 20,737.00	\$ 15,000.00
3074	TR # 3 - REPAIRS	\$ 15,000.00	\$ 2,800.00	\$ 15,000.00
3075	TR # 4 - REPAIRS	\$ 15,000.00	\$ 16,833.00	\$ 15,000.00
3076	TR # 5 - REPAIRS	\$ 15,000.00	\$ 15,404.00	\$ 15,000.00
3077	TR # 6 - REPAIRS	\$ 15,000.00	\$ 21,650.00	\$ 15,000.00
3069	TR # 7 - REPAIRS	\$ 5,000.00	\$ 867.00	\$ 5,000.00
3068	TR # 8 - REPAIRS		\$ 2,771.00	\$ 5,000.00
3067	TR # 9 - REPAIRS		\$ 2,840.00	\$ 5,000.00
3079	GR#1 - CAT - REPAIRS	\$ 15,000.00	\$ 6,721.00	\$ 15,000.00
3080	GR#2 - REPAIRS	\$ 15,000.00	\$ 9,000.00	\$ 81,444.20
3065	GR#3 - REPAIRS		\$ 4,392.00	\$ 15,000.00
3081	BACKHOE REPAIRS	\$ 3,000.00	\$ 1,651.00	\$ 3,000.00
3082	LOADER	\$ 2,500.00	\$ 2,390.00	\$ 2,500.00
3083	JOHN DEERE MOWER	\$ 1,000.00		\$ 1,000.00
3084	POWER WASHER	\$ 3,000.00	\$ 3,840.00	\$ 3,000.00
3085	CHAIN SAW	\$ 1,000.00		\$ 1,000.00
3086	ROADSIDE MOWER	\$ 2,000.00	\$ 1,086.00	\$ 1,000.00
3500	WINTER CONTROL-PLOW & WING PARTS	\$ 20,000.00	\$ 19,900.00	\$ 20,000.00
7015	JOHN DEERE GRADER LOAN	\$ -		
2191	RADIO AND TRUCK LICENSES	\$ 12,000.00	\$ 11,658.00	\$ 12,000.00
2195	RADIO MAINTENANCE & REPAIR	\$ 2,500.00		\$ 2,500.00
TOTAL		\$ 320,000.00	\$ 303,720.00	\$ 416,444.20
NEW EQUIPMENT (CAPITAL)				
7010	VEHICLES - TRUCK	\$ -		\$ 70,000.00
7005	MOWER			\$ 20,000.00
	GRADER	\$ 610,000.00	\$ 293,781.00	
	TRUCK - 2 TONNE DUALY PICK-UP	\$ 100,000.00	\$ 116,982.00	
	PICK-UP EQUIPMENT	\$ 60,000.00	\$ 32,264.00	
	TRACTOR WITH BLOWER BRUSHER (loan)	\$ 52,000.00		\$ 60,000.00
TOTAL		\$ 822,000.00	\$ 443,027.00	\$ 150,000.00

GL ACCT # 5005	ROADWAYS EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
BRIDGES, CULVERTS, DRAINS				
3100	BRIDGE & CULVERT MTCE	\$ 15,000.00	\$ 7,212.00	\$ 15,000.00
	BRIDGE # 7	\$ 25,000.00		
3111	BRIDGE # 11	\$ -		
3115	BRIDGE # 13	\$ -		
3116	BRIDGE #004 - CLOSURE	\$ -		
3100	BRIDGE # 6 - CONSTRUCTION - WATERPROOF/PAVE	\$ 20,000.00		
3118	BRIDGE # 2023 ENGINEERING DESIGN	\$ 18,000.00	\$ 24,500.00	\$ 200,000.00
3850	DRAIN ASSESSMENTS NEW REPORTS	\$ -		
3851	ROAD CROSSINGS DUE TO DRAIN MTCE	\$ 55,000.00	\$ 37,394.00	\$ 55,000.00
7021	CULVERT 2027 LOAN PAYMENT	\$ 40,907.00	\$ 40,907.00	\$ 40,907.00
3178	30 SIDEROAD CULVERT - EMERG. REPAIR	\$ -		
3156	CULVERT 2013	\$ -		
3165	CULVERT 2021	\$ -		
TOTAL		\$ 173,907.00	\$ 110,013.00	\$ 310,907.00
ROADSIDE				
3215	GRASS MOWING & WEED SPRAYING	\$ 2,675.00	\$ 5,098.00	\$ 5,200.00
3212	PARK MAINTENANCE		\$ 3,155.00	\$ 4,000.00
3205	BRUSHING - TREE TRIM AND REMOVAL			
3206	DITCHING	\$ 30,000.00	\$ 16,062.00	\$ -
3322	CATCH BASINS	\$ 2,500.00		\$ 2,500.00
3610	GUIDE POSTS & HARDWARE	\$ 5,000.00	\$ 202.00	\$ 5,000.00
3315	SHOULDER MAINTENANCE	\$ 5,000.00	\$ 5,100.00	\$ 5,000.00
TOTAL		\$ 45,175.00	\$ 29,617.00	\$ 21,700.00
HARDTOP				
3304	PREVENTATIVE MAINTENANCE	\$ 20,000.00	\$ 8,366.00	\$ 20,000.00
3310	COLD MIX, PATCHING, ROUTINE MTCE	\$ 6,000.00	\$ 2,266.00	\$ 6,000.00
3320	SWEEPING, FLUSHING, CLEANING	\$ 5,500.00	\$ 5,164.00	\$ 5,500.00
3321	LINE PAINTING	\$ 17,000.00	\$ 16,856.00	\$ 18,000.00
TOTAL		\$ 48,500.00	\$ 32,652.00	\$ 49,500.00
LOOSETOP				
3125	POULTON PLACE - CORBETTON		\$ 132,194.00	\$ -
3750	TOWNLINES	\$ 1,000.00	\$ 224.00	\$ 1,000.00
3200	ROADSIDE MAINTENANCE	\$ 1,000.00		\$ 1,000.00
3210	GRAVEL RESURFACING	\$ 400,000.00	\$ 440,254.00	\$ 400,000.00
3211	GRAVEL MAINTENANCE	\$ 30,000.00	\$ 31,691.00	\$ 30,000.00
3410	DUST LAYER (CALCIUM CHLORIDE)	\$ 170,000.00	\$ 128,035.00	\$ 170,000.00
TOTAL		\$ 602,000.00	\$ 732,398.00	\$ 602,000.00

GL ACCT # 5005	ROADWAYS EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
WINTER CONTROL				
3510	SAND & SALT	\$ 55,000.00	\$ 63,011.00	\$ 65,000.00
3505	SNOW REMOVAL/BLOWING	\$ -		\$ 5,000.00
TOTAL		\$ 55,000.00	\$ 63,011.00	\$ 70,000.00
ROAD IMPROVEMENT				
3130	2ND LINE SW/ 15 SIDE ROAD	\$ -		
3139	7TH LINE SW/ 4TH LINE OS	\$ 150,000.00	\$ 186,750.00	
3138	RIVERVIEW/HUNTER PKWY	\$ 250,000.00	\$ 153,635.00	
3124	15 SR 3RD L TO CTY RD 124/GEORGE, ADDESON LLOYD ST	\$ 250,000.00	\$ 171,745.00	
3144	3RD LINE 20 SR 1.2 KM SOUTH/MILL LANE	\$ 250,000.00	\$ 284,478.00	
	15 SR MAIN ST 1 KM EAST			\$ 250,000.00
	GEORGE STREET ADDESON ST AND LLOYD ST			\$ 125,000.00
	260 SIDE ROAD 2ND SW TO 4TH LINE SW	\$ -		
TOTAL		\$ 900,000.00	\$ 796,608.00	\$ 375,000.00
RESERVE				
5030	REPLACEMENT EQUIPMENT RESERVE	\$ 150,000.00	\$ 150,000.00	\$ 220,000.00
	ROAD CAPITAL RESERVES			\$ 50,000.00
TOTAL		\$ 150,000.00	\$ 150,000.00	\$ 270,000.00
BUILDING IMPROVEMENTS				
7041	WORKS BUILDING ROOF REPLACEMENT			\$ -
TOTAL		\$ -	\$ -	\$ -
TOTAL ROAD EXPENDITURES		\$ 3,872,702.00	\$ 3,424,286.83	\$ 3,183,793.20

GL ACCT # 5007	ENVIRONMENTAL SERVICES EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
2171	LEVELLING	\$ 7,500.00	\$ -	\$ 7,500.00
2105	LANDFILL STUDY/MONITORING	\$ 16,318.00	\$ 8,159.00	\$ 16,318.00
2190	MISCELLANEOUS	\$ 100.00	\$ 10.00	\$ 100.00
7001	REHABILITATION RESERVE	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00
7010	ENVIRONMENTAL/SUSTAINABILITY	\$ -		
	TOTAL	\$ 33,918.00	\$ 18,169.00	\$ 33,918.00

GL ACCT # 5010	RECREATION SERVICES EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
5055	CORBETTON PARK	\$ 2,500.00	\$ 26,534.00	\$ 2,500.00
6060	HORNING'S MILLS PARK	\$ 5,500.00	\$ 8,942.00	\$ 12,000.00
6065	HORNING'S MILLS COMMUNITY HALL	\$ 12,000.00	\$ 29,843.00	\$ 15,000.00
6063	HORNING'S MILLS HALL PARKING LOT			
6064	HORNING'S MILLS HALL BLDNG			
6066	HORNING'S MILLS HERITAGE PROJECT	\$ 500.00		\$ 500.00
6070	CENTRE DUFFERIN RECREATION COMPLEX	\$ 54,000.00	\$ 57,075.00	\$ 60,000.00
6080	DUNDALK COMMUNITY CENTRE	\$ 15,500.00	\$ 15,500.00	\$ 16,200.00
6100	NORTH DUFFERIN COMMUNITY CENTRE	\$ 62,773.00	\$ 76,100.00	\$ 20,000.00
	HORNING'S MILLS HALL BOARD	\$ 2,000.00		
	HERITAGE COMMITTEE	\$ 3,500.00		\$ 3,500.00
	TOTAL	\$ 158,273.00	\$ 213,994.00	\$ 129,700.00

GL ACCT # 5016	CEMETARY EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
8902	HORNING'S MILLS CEMETERY	\$ 5,000.00		\$ 5,000.00
8904	ST. PAUL'S CEMETERY			
	TOTAL	\$ 5,000.00	\$ -	\$ 5,000.00

GL ACCT # 5011	LIBRARY EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
6110	SHELBURNE LIBRARY	\$ 61,915.00	\$ 61,915.00	\$ 60,000.00
6120	DUNDALK LIBRARY	\$ 9,000.00	\$ 9,081.00	\$ 9,490.00
	TOTAL	\$ 70,915.00	\$ 70,996.00	\$ 69,490.00

GL ACCT # 5012	PLANNING SERVICES EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
2100	PROFESSIONAL/LEGAL FEES	\$ 60,000.00	\$ 23,285.00	\$ 60,000.00
2018	OFFICIAL PLAN	\$ 30,000.00		\$ 50,000.00
2109	NEW ZONING BY-LAW	\$ 45,000.00		\$ 75,000.00
2101	LPAT/OLT APPEALS	\$ -		
2102	LPAT/OLT APPEALS RESERVES	\$ 15,000.00	\$ 15,000.00	\$ 15,000.00
2304	STRADA OPA/ZBA			
	TOTAL	\$ 150,000.00	\$ 38,285.00	\$ 200,000.00

GL ACCT # 5009	DRAINAGE EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
3060	DRAINAGE SUPERINTENDENT	\$ 50,000.00	\$ 28,199.00	\$ 50,000.00
3070	NUISANCE BEAVER & BEAVER DAM REMOVAL	\$ 5,000.00	\$ 166.00	\$ 5,000.00
	TOTAL	\$ 55,000.00	\$ 28,365.00	\$ 55,000.00

GL ACCT # 5002	RESERVES EXPENDITURES	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
	COVID - SAFE RESTART			\$ -
5042	SPECIAL RESERVE FUND EMERGENCY RELIEF			
	TOTAL	\$ -	\$ -	\$ -

TOTAL EXPENITURER	\$ 6,070,427.00	\$ 5,561,867.71	\$ 5,758,757.20
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GL ACCT #	TAXATION REVENUE	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
4001 0700	SUPPLEMENTAL TAXES	\$ 85,000.00	\$ 87,652.00	\$ 90,000.00
4003 0100	PAYMENT IN LIEU	\$ 1,950.00	\$ 2,015.00	\$ 2,050.00
	TOTAL TAXATION REVENUE	\$ 86,950.00	\$ 89,667.00	\$ 92,050.00

GL ACCT # 4004	GRANT REVENUE	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
150	OMPF	\$ 175,300.00	\$ 175,300.00	\$ 168,900.00
300	RIDE GRANT	\$ 6,600.00	\$ 6,700.00	\$ 7,508.00
172	COURT SECURITY & PRISONER TRANSPORT	\$ 730.00		\$ 730.00
500	LIBRARY GRANT	\$ 4,452.00	\$ 4,452.00	\$ 4,452.00
156	OCIF FUNDING (FORMULA COMPONENT)	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00
159	SAFE RESTART AGREEMENT (COVID)			
700	ONTARIO AGGREGATE LIC. FEE	\$ 115,000.00	\$ 97,967.00	\$ 100,000.00
100	DRAINAGE SUPERINTENDENT	\$ 25,000.00	\$ 13,755.00	\$ 25,000.00
	TOTAL COUNCIL REVENUE	\$ 427,082.00	\$ 398,174.00	\$ 406,590.00

GL ACCT # 4010	ADMINISTRATION REVENUE	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
100	TAX CERTIFICATES	\$ 2,500.00	\$ 2,600.00	\$ 2,500.00
110	TAX STATEMENT/DUPLICATE TAX BILLS	\$ 500.00	\$ 600.00	\$ 500.00
115	REMINDER/OVERDUE NOTICE FEE	\$ 3,000.00	\$ 3,200.00	\$ 3,000.00
200	BUILDING PERMIT APPROVAL	\$ 5,500.00	\$ 5,300.00	\$ 5,500.00
250	SITE ALTERATION PERMIT APPROVAL	\$ -	\$ 500.00	\$ 500.00
300	NSF CHEQUE CHARGE	\$ 100.00	\$ 210.00	\$ 200.00
4015 0100	DOG LICENCES	\$ 10,000.00	\$ 9,950.00	\$ 10,000.00
4066 0000	LOTTERY LICENCES	\$ 20.00	\$ 20.00	\$ 20.00
4040 0100	LIVESTOCK CLAIM GRANTS	\$ 4,000.00	\$ 2,792.00	\$ 3,000.00
4064 0000	BUSINESS LICENCES	\$ 250.00		
	TAX SALE PROCEEDS (2024)			\$ 68,444.20
	TOTAL ADMINISTRATION REVENUE	\$ 25,870.00	\$ 25,172.00	\$ 93,664.20

GL ACCT # 4012	FIRE REVENUE	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
100	FIRE REVENUE	\$ 1,500.00	\$ 2,395.00	\$ 2,000.00
300	FIRE PERMIT	\$ 3,500.00	\$ 3,525.00	\$ 3,500.00
	TOTAL FIRE REVENUE	\$ 5,000.00	\$ 5,920.00	\$ 5,500.00

GL ACCT # 4020	ROAD REVENUE	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
110	ROADS MISC REVENUE	\$ 9,000.00	\$ 755.00	\$ 750.00
115	ROAD OCCUPANCY PERMITS		\$ 46,875.00	\$ 9,500.00
125	ENTRANCE PERMITS	\$ 4,000.00	\$ 3,400.00	\$ 4,000.00
130	WIDE LOAD PERMITS	\$ 2,000.00	\$ 800.00	\$ 1,000.00
200	CULVERTS			
140	BRETTON ESTATES SNOW PLOWING			
500	SHELBURNE ROAD AGREEMENT	\$ 6,442.00	\$ 6,442.00	\$ 6,887.00
	TRANSFER FROM RESERVES			
703	TRFR FROM GAS TAX	\$ 135,000.00	\$ 135,000.00	\$ 100,000.00
704	TRFR FROM ROAD CAPITAL RESERVE	\$ 200,000.00	\$ 200,000.00	
702	TRFR FROM EQUIPMENT RESERVE - TRUCK	\$ 595,000.00	\$ 268,027.00	\$ 120,000.00
0	TRFR FROM WORKING CAPITAL RESERVE	\$ 99,000.00	\$ 45,000.00	
	TRFR FROM PAVING RESERVE	\$ 74,000.00	\$ 74,000.00	
	TRFR DEV CHG (GRADER)	\$ 175,000.00	\$ 175,000.00	
	TRFR DEV CHG (PAVING)(DC STUDY)	\$ 52,000.00	\$ 52,000.00	\$ 27,000.00
	TAX STABILIZATION	\$ 150,000.00	\$ 150,000.00	\$ 217,000.00
	TRFR PARK PAVILLION		\$ 26,237.00	
	TRFR MMAH			\$ 16,000.00
	TRFR WORKING			\$ 200,000.00
	TRFR WORKING			\$ 200,000.00
	TOTAL ROADS REVENUE	\$ 1,501,442.00	\$ 1,157,299.00	\$ 902,137.00

GL ACCT # 4035	PLANNING REVENUE	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
100	OFFICIAL PLAN APPLICATION	\$ -		
310	SITE PLAN APPLICATION FEES	\$ -	\$ 750.00	\$ 750.00
350	ZONING BY-LAW AMENDMENT	\$ 6,000.00	\$ 3,000.00	\$ 3,000.00
300	CONSENT APPLICATIONS	\$ 6,000.00	\$ 9,000.00	\$ 8,000.00
325	MINOR VARIANCE	\$ 5,000.00	\$ 2,000.00	\$ 2,000.00
200	ZONING REQUESTS	\$ 1,000.00	\$ 1,400.00	\$ 1,200.00
360	CHANGE OF USE CERTIFICATE APPLICATION	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00
370	TELECOMMUNICATION FACILITES APPLICATION	\$ -		
375	PRE-APPLICATION CONSULTATION	\$ 12,000.00	\$ 11,000.00	\$ 10,000.00
500	PROFESSIONAL SERVICES REIMBURSEMENT	\$ -	\$ 5,333.00	\$ 30,000.00
	TRFR FROM DEV CHG (OFFICIAL PLAN)	\$ 21,000.00	\$ -	
	TOTAL PLANNING REVENUE	\$ 53,500.00	\$ 34,983.00	\$ 57,450.00

GL ACCT # 4050	OTHER REVENUE	2023 BUDGET	2023 PROPOSED YEAR END AMOUNT	2024 BUDGET
100	MISCELLANEOUS REVENUE	\$ 600.00	\$ 5,805.00	\$ 600.00
125	CHD COMMUNITY CONTRIBUTION	\$ 309,000.00	\$ 309,000.00	\$ 309,000.00
130	PLATEAU COMMUNITY CONTRIBUTION	\$ 35,000.00	\$ 36,763.00	\$ 35,000.00
135	DWP COMMUNITY CONTRIBUTION	\$ 264,000.00	\$ 264,000.00	\$ 264,000.00
4015 0400	BY-LAW INFRACTION TO TAXES		\$ 6,000.00	\$ 6,000.00
200	PENALTIES AND INTEREST ON TAXES	\$ 105,000.00	\$ 104,270.00	\$ 105,000.00
300	INTEREST ON DEPOSITS	\$ 45,000.00	\$ 118,115.00	\$ 100,000.00
400	POA	\$ 45,000.00	\$ 59,250.00	\$ 50,000.00
4077 0000	LAND RENTAL	\$ 2,550.00	\$ 2,550.00	\$ 2,550.00
4050 0460	TRFR FROM MMAH-2019 FOR COUNCIL HYBRID	\$ 5,000.00	\$ 5,000.00	
	TRFR FROM EMERGENCY RELIEF FUND	\$ 25,000.00		\$ 25,000.00
4050 0460	TRFR FROM TAX STABILIZATION (LEGALS OVERAGE)	\$ 40,000.00	\$ -	
	TRFR FROM DC CHARGES OPP		\$ 3,828.42	
	HORNINGS MILLS OTF PROJECT		\$ 13,030.00	
	TOTAL OTHER REVENUE	\$ 876,150.00	\$ 927,611.42	\$ 897,150.00
	TOTAL REVENUE	\$ 2,975,994.00	\$ 2,638,826.42	\$ 2,454,541.20
	TOTAL EXPENDITURES	\$ 6,070,427.00	\$ 5,561,867.71	\$ 5,758,757.20
		\$ 3,094,433.00	\$ 2,923,041.29	\$ 3,304,216.00
			INCREASE	6.78%
			Including Growth	4.88%



The Corporation of

THE TOWNSHIP OF MELANCTHON

157101 Highway 10, Melancthon, Ontario, L9V 2E6

MEMO TO COUNCIL

TO: MAYOR WHITE AND MEMBERS OF COUNCIL

FROM: DENISE B. HOLMES, AMCT, CAO/CLERK

SUBJECT: MELANCTHON COUNCIL AWARD FOR COMMUNITY LEADERSHIP

MEETING DATE: MARCH 21, 2024

BACKGROUND AND DISCUSSION

At the meeting held on June 1, 2023, the following Notice of Motion – Moved by Deputy Mayor James McLean and Seconded by Councillor Bill Neilson was considered and passed. The motion read as follows:

That Whereas Melancthon Township is home to several outstanding members who care about their community and make it a better place to work, live and play;

And Whereas Melancthon Council would like to recognize and celebrate these local community builders who, through their contributions, are making a difference in our Township;

Now Therefore Be It Resolved that the Council of the Township of Melancthon establishes a "Melancthon Council Award for Community Leadership"; And further that Council develop the framework to identify the process for the Award and that Staff be directed to place monies in the 2024 Operating Budget to fund the Award.

There have been monies allocated in the 2024 Budget under the Miscellaneous Administration Account for the Award and the framework has been drafted by Deputy Mayor McLean for Council's consideration and approval.

It is intended that this Award be publicly announced and awarded annually at the Melancthon Day Event held in June at the Horning's Mills Community Park.

The type of Award and gift of appreciation to be discussed at the March 21, 2024 Council meeting.

MAR 21 2024

GB 18.4.1



Melancthon Council Award for Community Leadership

This award celebrates one Melancthon resident per year who has made exceptional and outstanding contributions to the well-being of their community.

Eligibility

The person you nominate (the nominee) must be a resident of Melancthon.

You cannot nominate:

- yourself
- someone who has passed away
- an elected federal, provincial or municipal representative currently in office
- a public appointee if their achievements relate to their current appointment

Required information

To submit a nomination, you will need to provide:

- The nominee's first name, last name, email address and phone number.
- The nominator's first name, last name, email address and phone number.
- A detailed description of the nominee's achievements and/or contributions to the community.
- At least one signed testimonial letter. The letter must be from someone who is not the nominator. An electronic signature or scanned copy of the signed letters is acceptable. The testimonial writer should:
 - know the nominee
 - be able to explain the value and impact of the nominee's achievements/contributions
 - support the nomination
- The testimonial writers' first name, last name, email address and phone number should be included in their letter.

Additional information

You may include additional materials if they give more insight into your nominee's accomplishments/contributions, such as:

- supplementary testimonials

- publications
- media stories and news articles

The testimonial letters and supporting documents are accepted in these formats: doc, docx, pdf, jpeg, jpg, gif, png, txt. The maximum file size for each is 2 MB.

Deadline for nominations

The deadline to submit your nomination and supporting paperwork is **12:00 p.m. EST on May 9, 2024.** All materials must be submitted in person at the Township of Melancthon Office or by email to the Clerk at dholmes@melancthontownship.ca.

Selection process

The Township of Melancthon reviews all nominations. Nominations are assessed based on the following considerations (*These considerations are not listed in any priority order*):

- Impact on the Melancthon community.
- Quality of Commitment/Contributions to the Melancthon community:
 - Financial
 - In-Kind
 - Volunteer hours (themselves or their staff)
- Length of Service: *Has the nominee demonstrated sustained commitment to community leadership and service?*
- Leadership qualities: Has the nominee:
 - Served in a leadership capacity
 - Played a role in the creation of a project or non-profit organization
 - Effectively mobilized volunteers, partners and resources to serve the Melancthon community
- Role modeling: *How has the nominee inspired others to engage in community service?*

Award Presentation

The successful candidate will be publicly announced and awarded the Community Leader Recognition Award at Melancthon Day on June 22, 2024. If the candidate is unable to attend Melancthon Day, alternative arrangements can be made. More details about the award presentation will be available soon.



The Corporation of

THE TOWNSHIP OF MELANCTHON

157101 Highway 10, Melancthon, Ontario, L9V 2E6

MEMO TO COUNCIL

TO: MAYOR WHITE AND MEMBERS OF COUNCIL

FROM: DENISE B. HOLMES, AMCT, CAO/CLERK

SUBJECT: COUNCIL CONFERENCE AND CONTINUING EDUCATION POLICY

MEETING DATE: MARCH 21, 2024

BACKGROUND AND DISCUSSION

On March 7, 2019, Council approved a Council Conference and Continuing Education Policy. The annual allowance that was provided for in that policy was \$1,500.00 per Councillor, per annum. This Policy excluded the Mayor, we only had one Representative at County Council during this time, as the Mayor's allowance was through the County of Dufferin.

During the 2024 Public Budget Meeting, the Conference Policy was discussed and a request was made to increase the annual contribution from \$1,500.00 to \$3,000.00 as the \$1,500.00 only covered one Conference per year. The request was approved and Staff were directed to amend the Policy.

The amended Policy is attached for Council approval.

MAR 21 2024

GB 18.4.2



The Corporation of

THE TOWNSHIP OF MELANCTHON

157101 Highway 10, Melancthon, Ontario, L9V 2E6

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Fax No. - (519) 925-1110

Website: www.melancthontownship.ca

Email: info@melancthontownship.ca

COUNCIL CONFERENCE AND CONTINUING EDUCATION POLICY

Purpose

The Corporation recognizes the importance of having well-informed Council and encourages Councillors to attend municipal conferences, seminars and/or register for online/in class courses.

The purpose of this policy is to define the type and amount of expenses, associated with Councillors' attendance at conferences or registering for seminars/courses that will be reimbursed by the Township of Melancthon.

Statement

1. This policy will apply to all Councillors of the Corporation of the Township of Melancthon.
2. Each member of Council will be provided an annual \$3,000.00 budget to attend conferences relating to Township business or to register for continuing education. This budgeted amount will be reviewed annually. Unused funds cannot be carried forward to the next year.
3. Conference arrangements and seminar/course registration and reimbursements are coordinated through the Clerk's Office. Council should notify staff in a timely manner if they would like to attend a conference or register for an educational seminar/course.
4. Only the expenses of Councillors will be subject to reimbursement. Expenses of spouses or companions will not be subject to reimbursement.
5. The following expenses are eligible for reimbursement

Registration - prepaid by the Township

Travel - by most economical means – arranged by Township Staff or use of own car, km's will be paid at current reimbursement rate, including parking.

Accommodation - prepaid by the Township or reimbursed upon the submission of a receipt.

Meals - meals are eligible for reimbursement, meals included as part of the conference registration are not eligible. The purchase of alcohol is not eligible for reimbursement.

Training and Resource Materials related to Council - i.e. Books

Remuneration - Councillors will be paid in accordance with Section 4 of the By-law to Provide Remuneration, Allowances and Expenses for Members of Council and this will not be included in the \$3,000.00 annual budget limit.

6. Councillors shall present all receipts, together with a statement of km's travelled to the Clerk, no later than thirty (30) working days after the conclusion of the conference or seminar/course.
7. The conferences that are generally attended for Township business include, but are not limited to:

AMO - Association of Municipalities of Ontario

OGRA - Ontario Good Roads Association

ROMA - Rural Ontario Municipal Association

FCM - Federation of Canadian Municipalities

Other conferences, seminars/courses focusing on current community and municipal issues are also eligible.

8. Councillors will present a verbal or written report to Council after the conference, seminar/course.
9. The Mayor and Deputy Mayor have allocated funds available to them in the County of Dufferin Conference Policy and therefore they are not included in this Policy relating to Conferences.

**** Note - New Councillor Training is not included in the annual \$3,000.00 budget , as it will be covered by the Township****

RECEIVED

FEB 12 2024



SHELBURNE PUBLIC LIBRARY

201 Owen Sound Street
Shelburne, Ontario
L9V 3L2

Telephone 519-925-2168
Fax 519-925-6555
www.shelburnelibrary.ca

January 29, 2024

Township of Melancthon
157101 Highway 10
Melancthon, ON L9V 2E6

Attention: Ms. Denise Holmes

Dear Ms. Holmes

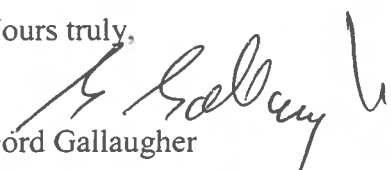
Re: 2024 Library Board Agreement

Enclosed are 3 copies of the 2024 Municipal Agreement between the Township of Melancthon and the Shelburne Public Library Board, in duplicate. Please review, sign and return the 2 copies of the agreement at your earliest convenience. We will sign and return one copy for your records.

I have also enclosed invoices for the instalments as requested by some municipalities.

If you have any questions, please do not hesitate to contact either myself or Rose Dotten, CEO.

Yours truly,


Gord Gallaugher
Treasurer
Shelburne Public Library

/gg
Encl. agreement, 3 invoices

MAR 21 2024

GB 18.4.3

AGREEMENT

THIS AGREEMENT made in triplicate this day of January, 2024,

BETWEEN: THE SHELBURNE PUBLIC LIBRARY BOARD
(hereinafter called the "Board")

AND THE CORPORATION OF THE TOWNSHIP OF MELANCTHON
(hereinafter called the "Municipality")

WHEREAS Section 29 (1) of the Public Libraries Act, R.S.O. 1990 Chapter P.44, allows for the council of a municipality to enter into a contract with a public library board for the purpose of providing the residents of the municipality with library services.

AND WHEREAS the Board and the Municipality deem it expedient to enter into such an agreement.

NOW THEREFORE WITNESSETH THIS AGREEMENT that in consideration of the covenants and terms contained herein, the parties hereto agree as follows:

1. DESCRIPTION OF SERVICES:

- 1.1 The Board shall endeavour to provide in co-operation with other public library boards a comprehensive and efficient library service to the residents of the Municipality.
- 1.2 The Board shall operate a library which shall be open a minimum of 25 hours per week and shall not make a charge for membership in the library.
- 1.3 The Board shall allow the residents of the Municipality to,
 - a. borrow circulating materials; and
 - b. use reference and information services as the Public Library Board considers practicable, without making any charge.
- 1.4 The Board may impose such fees as it considers proper for services not referred to in sections 1.2 and 1.3.

2. WARRANTIES OF THE BOARD:

- 2.1 The Board is a corporation duly established under the *Public Libraries Act, 1990*.
- 2.2 To ensure quality library service under this Agreement the Board shall:
 - 2.2.1 ensure that all materials are available for use outside the library except those used for reference service, and rare and fragile items;
 - 2.2.2 ensure circulation policies of greatest convenience to the users and maximum use of materials;
 - 2.2.3 ensure that the selection of materials reflects the needs of the community.

3. REPORTS:

- 3.1 The Board shall submit an annual report to the Municipality.
- 3.2 The Municipality shall make an annual financial report to the Minister and make any other reports required by the Public Libraries Act, 1990 and the regulations or as requested by the Minister.

4. LIMITATION OF LIABILITY:

4.1 The Municipality shall not be liable for any injury, death or property damage to the Board, its employees or agents or for any claim by any third party against the Board, its employees or agents.

5. INSPECTION:

5.1 The Municipality shall be entitled, at all reasonable times, to review any records, books, accounts and documents in the possession of or under the control of the Board, subject to the *Municipal Freedom of Information and Protection of Privacy Act (MFIPPA)*, Section 14.

6. NOTICES:

6.1 Notices under this Agreement shall be given in writing by personal delivery, or by mail, or by facsimile transmission.

6.2 Notice by mail shall be deemed to have been given on the third business day after the date of mailing.

6.3 Mailing addresses for notices under this Agreement are as follows:

- i) for Township of Melancthon
157101 Highway 10
Melancthon, ON L9V 2E6
- ii) for Shelburne Public Library Board
201 Owen Sound St.
Shelburne, ON L9V 3L2

7. FINANCIAL:

7.1 The Municipality shall annually levy upon its assessment a sum to be used for the maintenance of the Board.

7.2 The Municipality shall in addition pay to the Board certain monies paid to the Municipality by the Province of Ontario for library services.

7.3 The sum of funds received by the Municipality under Sections 7.1 and 7.2 shall be equal to the Municipality's portion of the total funds required by the Board, as shown in Appendix B.

7.4 The attached Appendix A, which forms part of this Agreement, is a copy of the Board resolution being the new Funding Formula that was passed by the Board on June 21, 2016.

7.5 The attached Appendix B, which forms part of this Agreement, is a listing of the Payments to be made by the Municipality if the option in 8.1.A is chosen.

8. PAYMENT TERMS:

8.1 The Municipality shall pay to the Board the funds under Section 7.3 according to one of the following payment options:

- A.
 - 1. Fifty percent (50%) of the amount required for Board purposes in the current year **on or before** the 31st day of March, 2024.
 - 2. Twenty-five percent (25%) of the amount required for Board purposes in the current year, on or before the 30th day of June, 2024.
 - 3. Remainder of the balance owing on or before the 30th day of September 2024.
- B.
 - 1. Funds raised under Section 7.1 shall be paid to the Board in equal installments coincident with the dates upon which the Municipality collects its taxes in 2024.

2. Funds raised under Section 7.2 shall be paid to the Board within fifteen (15) days of being received by the Municipality.

8.2 If, in the year 2024 the Board's budget is not approved by the Town of Shelburne by March 31, 2024, the Municipality shall pay to the Board an interim payment of funds according to the following schedule which interim payment of funds shall be deducted from the Municipality's 2024 levy once the Board's budget is finalized.

1. Fifty percent (50%) of the amount required for board purposes in 2023, which amount shall be paid to the Board on or before the 31st day of March, 2024.

9. FAILURE TO MAKE PAYMENTS:

9.1 If the payment schedule chosen by the Municipality is not complied with, the Library reserves the right to withdraw the Library services to residents of the Municipality until the payment is complied with.

10. ENTIRE AGREEMENT:

10.1 This agreement constitutes the entire Agreement between the parties. Upon the execution of this Agreement, any existing Agreements between the parties with respect to library services shall forthwith become null and void.

10.2 In the event that any covenant, provision or term of this Agreement should at any time be held by any competent tribunal to be void or unenforceable, then the Agreement shall not fail but the covenant, provision or term shall be deemed to be severable from the remainder of this Agreement which shall remain in full force and effect, mutatis mutandis.

IN WITNESS WHEREOF the parties hereto have hereunto affixed their respective corporate seals duly attested to by the hands of their respective proper officers in that behalf.

THE SHELburne PUBLIC LIBRARY BOARD

THE CORPORATION OF THE TOWNSHIP OF MELANCTHON

Per: _____
Chair Date Signed:

Per: _____
Mayor Date Signed:

Per: _____
Treasurer Date Signed;

Per: _____
Clerk Date Signed:

MUNICIPALITY ELECTION UNDER SECTION 8 Initial one only:

8.1.A _____
Mayor

Clerk

8.1.B _____
Mayor

Clerk

APPENDIX A

Resolution extracted from Shelburne Public Library Board minutes dated June 21, 2016:

Funding Formula

Motion 29-16 L. Townsend, D. Besley

WHEREAS on June 8, 2016, a meeting was held with the Mayors, Municipal Clerks and Council Representatives of the Town of Shelburne and the four contracting Municipalities of Amaranth, Melancthon, Mono and Mulmur, together with Geoff Dunlop, Board Chair, Rose Dotten, CEO/Head Librarian, and Gord Gallaughier, Treasurer;

AND WHEREAS it was determined that the funding formula for the Shelburne Public Library should be revised to reflect the change in the number of households with patrons in all five municipalities;

Therefore, be it resolved that beginning in January, 2017, the levy required to balance the Shelburne Public Library operating budget will be allocated based on a 3-year average of active household cardholders, determined by the Library operating system, as of September 30 in the year preceding the budget year, for each municipality;

Be it further resolved that in addition to the foregoing, any capital projects for the Library requiring additional municipal funding will be allocated based on the same formula;

Be it further resolved that the Municipal partners may use the MPAC assessment totals as of September 30 each year as a verification tool for any substantial shifts in household user numbers.

Carried

APPENDIX B

Township of Melancthon Assessment is \$58,456.00

Under Option 8.1.A - the payments shall be:

March 31, 2024	\$29,228.00
June 30, 2024	\$14,614.00
September 30, 2024	\$14,614.00



Administration Centre: 400 Clyde Road, P.O. Box 729 Cambridge, ON N1R 5W6

Phone: 519-621-2761 Toll free: 1-866-900-4722 Fax: 519-621-4844 www.grandriver.ca

MEMORANDUM

Date: March 1, 2024
To: Accounts Payable, City Clerk
Melancthon Township
From: Sonja Radoja, Manager Corporate Services
Subject: **2024 MUNICIPAL APPORTIONMENT**

On January 26, 2024, the board of directors for the Grand River Conservation Authority approved the Municipal Apportionment for 2024.

You have been apportioned \$21,692.00 for 2024.

Levy is to be paid in three equal installments as follows:

Due March 31:	\$7,230.67
Due June 30:	\$7,230.67
Due September 30:	\$7,230.66

If you wish to discuss an alternative payment schedule or have any other questions, please contact Sonja Radoja at 519-621-2763 ext 2208 or email sradoja@grandriver.ca.

Regards,

A handwritten signature in black ink that reads "Sonja Radoja".

Sonja Radoja
Manager of Corporate Services

Denise Holmes

From: Tracey Atkinson <tatkinson@mulmur.ca>
Sent: Monday, March 11, 2024 11:46 AM
To: Denise Holmes
Cc: Roseann Knechtel
Subject: NDCC funding
Attachments: 9.4 NDCC Capital Needs.pdf; 2024-03-06 MARCH 06 Council Minutes.pdf

Hi Denise,

As a follow-up from last week, please see the motion below. I have also attached the draft minutes and the staff report. Council has directed a survey be sent to residents, which will go out later today or Monday. The motion will also be sent to other municipalities and users. The matter is scheduled to go back to Council for our April 3rd meeting. From the report, you can see which reserve accounts Mulmur’s treasurer is able to access to secure approximately \$1.1, and the remaining shortfall of about \$400,000. Mulmur is hopeful that we can work together with other municipalities and users to assist with the shortfall and have the facility open for the 24/25 season.

Please reach out to me if you wish to discuss reserves, funding opportunities, or wish for someone from our office/Council attend your upcoming meeting. We look forward to working with you.

Moved by Hawkins and Seconded by Lyon

WHEREAS the North Dufferin Community Centre (NDCC) has played a pivotal role in serving as a central hub for recreation, community events, celebrations, and gatherings and social interaction in the Village of Honeywood since 1912;

AND WHEREAS the preservation and continued operations of the NDCC will not only safeguard Honeywood’s cultural heritage but also enhance the overall well-being and pride of both the community and beyond;

AND WHEREAS Council can only support the continued operations of the NDCC facility, subject to receiving financial assistant from other municipalities and users;

NOWTHEREFORE Council direct staff to survey residents and obtain additional quotes on roofing options for consideration at a future meeting.

A recorded vote was requested by Deputy Mayor Hawkins.

	<u>Yea</u>	<u>Nay</u>
Deputy Mayor Hawkins	Y	
Councillor Clark	Y	
Councillor Cunningham	Y	
Councillor Lyon	Y	
Mayor Horner		N

CARRIED.

Sincerely,

Tracey Atkinson, BES RPP MCIP Dipl M.M. | CAO | Planner

Township of Mulmur | 758070 2nd Line East | Mulmur, Ontario L9V 0G8
Phone 705-466-3341 ext 222 | Direct Line: 705-980-1191 | tatkinson@mulmur.ca

This message (including attachments, if any) is intended to be confidential and solely for the addressee. If you received this e-mail in error, please delete it and advise me immediately. E-mail transmission cannot be guaranteed to be secure or error-free and the sender does not accept liability for errors or omissions.



STAFF REPORT

TO: Council
FROM: Heather Boston, Treasurer
MEETING DATE: March 6, 2024
SUBJECT: NDCC Capital Needs

PURPOSE:

To seek Council's approval to move forward with the capital projects needed to keep the North Dufferin Community Centre (NDCC) running into the 2024/25 season.

BACKGROUND & DISCUSSION:

Grants & Contributions

The Township's application for the Green and Inclusive Community Buildings (GICB) grant exceeded the minimum program requirements and scored strongly. Mulmur was unsuccessful in securing funding due to the high level of applications received for the program. Although our project complied with all program requirements, our RETScreen report indicated less energy conservation and GHG reductions in comparison to other applications.

2024 Capital Needs

The NDCC requires the following critical repairs to maintain operations.

Replacement of Ice Surface and Boards: The leak in the ice surface piping has deteriorated and poses a significant risk to the ongoing operations of the arena. Immediate replacement is necessary to ensure the arena remains operational.

Arena Roof Above the Norduff Room: Despite previous attempts, the roof above the Norduff room continues to leak and requires replacement to prevent further damage.

FINANCIAL IMPACTS:

NDCC 2024 Capital Needs

2024	Replacement of Ice Surface & Boards	\$ 1,500,000
2024	Norduff Room Roof & Ceiling	\$ 70,000
		\$ 1,570,000

Funding Sources

Council could utilize the following funding sources to complete the above capital projects.

Reserve Account	Funding	Ending Balance
Tax Rate Stabilization Fund	\$ 550,000	\$ 504,848
Efficiency Reserves	\$ 409,347	\$ -
Recreation Building Reserves	\$ 76,310	\$ -
Contingency Reserve	\$ 113,310	\$ -
Shortfall	\$ 421,033	
	\$ 1,570,000	\$ 504,848

Shortfall Options

1. Request financial support from the other municipalities and users of the facility.
2. Borrow from other reserves. The Township has additional reserves in the amount of \$2.8 million. Funds borrowed must be replaced within two years to ensure critical infrastructure projects as per the asset management plan are not deferred. Deferral could result in road closures.
3. Utilizing the remaining balance in the tax rate stabilization reserves. This would remove Council's opportunity to utilize this reserve to lower and stabilize future tax levies. An automatic 2025 tax levy increase of 3% would be required. Note: In 2024 Council utilized \$150,000 from this reserve to achieve a 3% reduction.
4. End investment in the NDCC facility and close the arena. This would decrease the operating budget by approximately \$200,000 per year.

Future Capital Projects for Consideration

Stairs	\$ 4,500
Rubber Flooring	\$ 16,000
Septic System Relocation	\$ 100,000
New Addition - Change Rooms	\$ 3,125,000
Accessibility Lift	\$ 200,000
Accessible Washrooms	\$ 100,000
Norduff Room & Lobby Renovations	\$ 500,000
New Front Wind Break	\$ 300,000
Lighting	\$ 60,000
Engineering & Permits	\$ 600,000
Total	\$ 5,005,500

The above-mentioned capital costs are not immediate requirements and can be planned and budgeted for in the future as funding and needs arise. These projects would require further funds. After replenishing the borrowed reserve funds, the Township would need to rebuild the NDCC Building Reserves.

Council may wish to consider initiating fundraising efforts to help fund future capital projects. A fundraising committee, temporary staff, or a consultant may be required to facilitate the creation and implementation of a fundraising plan.

STRATEGIC PLAN ALIGNMENT:

1. Growing a Prosperous Mulmur: Responsibly managing the fiscal resources of Mulmur and providing opportunities for success.

ENVIRONMENTAL IMPACTS:

Council may wish to discuss the environmental impacts associated with this report and recommendation.

RECOMMENDATION:

THAT Council provide direction on the future operations of the North Dufferin Community Centre.

Submitted by: Heather Boston, Treasurer, CPA, CA, CGA

Approved by: Tracey Atkinson, CAO, BES, MCIP, RPP, Dipl M.M.



**COUNCIL MINUTES
March 6, 2024 – 9:00 AM**

Council Present: Mayor Horner, Deputy Mayor Hawkins, Councillors Clark, Cunningham, and Lyon

Staff Present: Tracey Atkinson, Heather Boston, Roseann Knechtel, Chris Wolnik

1.0 CALL TO ORDER

The Mayor called the meeting to order at 9:01 a.m.

2.0 LAND ACKNOWLEDGEMENT

We begin this meeting by acknowledging that we are meeting upon the traditional Indigenous lands of the Tionontati (Petun) and Treaty 18 territory of the Anishinaabe peoples. We recognize and deeply appreciate their historic connection to this place and we also recognize the contributions Indigenous peoples have made, both in shaping and strengthening our community, province and country as a whole.

Council welcomed Chris Wolnik, Director of Infrastructure to Mulmur.

3.0 APPROVAL OF THE AGENDA

Moved by Cunningham and Seconded by Lyon

THAT Council approve the agenda.

CARRIED.

4.0 MINUTES OF THE PREVIOUS MEETING

Moved by Cunningham and Seconded by Clark

THAT the minutes of February 7, 2024 are approved.

CARRIED.

5.0 DISCUSSION ARISING OUT OF THE MINUTES - NONE

6.0 DISCLOSURE OF PECUNIARY INTERESTS - NONE

7.0 PUBLIC QUESTION PERIOD

Cheryl Russel questioned the costs of the snowplow repairs. Heather Boston, Treasurer, confirmed costs would be covered through insurance.

Cheryl Russel questioned the impact arena repairs would have on the 2025 tax levy. Heather Boston, Treasurer, noted discussions would take place at budget time and include options based on Council's decision later in the meeting.

8.0 PRESENTATIONS

8.1 Michele Fisher - Dufferin Community Foundation

Council welcomed Michele Fisher, Executive Director of the Dufferin Community Foundation who presented on the benefits of having a local foundation, upcoming events and fundraisers. The Mulmur Community Fund has a balance of \$5,650 and requires a minimum investment of \$25,000 to become active. Fisher suggested the creation of a Mulmur Community Fund Committee.

Council discussed investment management and operating costs. Council thanked the Dufferin Community Foundation for their presentation and work in the community.

8.2 Joe Miedema - 2023 Mansfield Water

Council welcomed Joe Miedema, P. Eng. General Manager of Dufferin Water Co. Ltd., who presented the 2023 annual water reports for the Mansfield Water System.

Chris Wolnik, Director of Infrastructure noted Council's responsibility as the system owner and highlighted that the Mansfield Water System received a rating of 100% from the Province in December 2023.

Council thanked Miedema for his commitment and hard work.

Moved by Cunningham and Seconded by Lyon

THAT Council receives and approves the 2023 annual and summary reports of the Mansfield Well Supply under the Drinking Water Systems Regulation O. Reg. 170 as submitted by Joe Miedema, P. Eng. General Manager of Dufferin Water Co. Ltd.

CARRIED.

9.0 REPORTS FOR DECISION

9.1 2024 Community Grants

Council reviewed the submitted applications and discussed funding amounts and eligibility.

Direction was given to present future grant applications based on project.

Direction was given to draft an amendment to the Community Grant Application to include the requirement of a budget sheet.

Moved by Lyon and Seconded by Cunningham

THAT Council approve the following 2024 grant applications:

- Erika Batdorf: \$500
- Primrose Elementary School: \$100
- Headwaters Communities in Action: \$500
- NDACT: \$500
- The Shepherd's Cupboard Foodbank: \$900
- Greg Lloyd: \$500

CARRIED.

9.2 2024 Zoning Housekeeping By-law

Moved by Lyon and Seconded by Clark

THAT Council direct staff to proceed with drafting a by-law and advertising for a public meeting in May 2024.

CARRIED.

9.3 Restatement of Mulmur's 2024 Budget

Moved by Lyon and Seconded by Cunningham

THAT Council approve the report of Heather Boston, Treasurer, Restatement of Mulmur's 2024 Budget per O.Reg. 284/09.

CARRIED.

Council recessed at 10:04 a.m. and returned at 10:10 a.m.

9.4 NDCC Report- Future Plans

Discussion ensued on grants, funding, resident input and roofing options, Council expressed interest in the development of a long-term strategy for funding future repairs and renovations.

Moved by Cunningham and Seconded by Horner

WHEREAS the North Dufferin Community Centre (NDCC) has played a pivotal role in serving as a central hub for recreation, community events, celebrations, and gatherings and social interaction in the Village of Honeywood since 1912;

AND WHEREAS the preservation and continued operations of the NDCC will not only safeguard Honeywood's cultural heritage but also enhance the overall well-being and pride of both the community and beyond;

NOW THEREFORE the Council of the Township of Mulmur support the continued operations of the NDCC facility;

AND THAT Council approve the amendment of the 2024 capital budget to include the costs of critical infrastructure replacement and repairs of the ice surface at the North Dufferin Community Centre to a maximum cost of \$1,500,000 to be funded through reserves.

AND THAT Council direct staff to obtain additional quotes on roofing options and develop a long-term financial strategy for funding future renovations and repairs at the NDCC to be presented for consideration at a future meeting;

AND FURTHER THAT Council direct staff to request financial assistance from other municipalities and users of the facility and commence fundraising efforts to help fund these critical infrastructure repairs required to maintain operations of the NDCC.

NOT CARRIED.

Moved by Hawkins and Seconded by Lyon

WHEREAS the North Dufferin Community Centre (NDCC) has played a pivotal role in serving as a central hub for recreation, community events, celebrations, and gatherings and social interaction in the Village of Honeywood since 1912;

AND WHEREAS the preservation and continued operations of the NDCC will not only safeguard Honeywood's cultural heritage but also enhance the overall well-being and pride of both the community and beyond;

AND WHEREAS Council can only support the continued operations of the NDCC facility, subject to receiving financial assistance from other municipalities and users;

NOW THEREFORE Council direct staff to survey residents and obtain additional quotes on roofing options for consideration at a future meeting.

A recorded vote was requested by Deputy Mayor Hawkins.

	<u>Yea</u>	<u>Nay</u>
Deputy Mayor Hawkins	Y	
Councillor Clark	Y	
Councillor Cunningham	Y	
Councillor Lyon	Y	
Mayor Horner		N

CARRIED.

10.0 COMMITTEE MINUTES AND REPORTS

- 10.1 Ontario Climate Caucus Meeting Notes: January 2024**
- 10.2 Shelburne Public Library Minutes: January 16, 2024**
- 10.3 Rosemont District Fire Board Minutes: February 2, 2024**
- 10.4 Dufferin County Council Minutes: February 8, 2024**
- 10.5 Mansfield Parks Advisory Committee Minutes: February 27, 2024**
- 10.6 Mansfield Parks Advisory Committee: 2023 Annual Report**

Moved by Hawkins and Seconded by Lyon

THAT Council receives the Committee Minutes and Reports.

CARRIED.

11.0 REPORTS FOR INFORMATION

- 11.1 Investment Report**
- 11.2 Annual Procurement Report**
- 11.3 2023 Council Renumeration Report**
- 11.4 Fireworks Survey Results**

Moved by Clark Seconded by Hawkins

THAT Council direct staff to draft a regulatory by-law prohibiting fireworks in the Township of Mulmur with the exception of Canada Day, Victoria Day, New Years Eve, and Diwali.

A recorded vote was requested by Councillor Clark.

	<u>Yea</u>	<u>Nay</u>
Councillor Clark	Y	
Councillor Cunningham		N
Councillor Lyon		N
Deputy Mayor Hawkins		N
Mayor Horner		N

NOT CARRIED.

- 11.5 Shelburne Library Update**
- 11.6 Town of Mono – MTO Correspondence**
- 11.7 Primrose Boundary Review Resolution**
- 11.8 Ministry of Environment: Modernizing Ontario’s Environmental Assessment Program**
- 11.9 Ontario Energy Board: Decision to End Gas Pipeline Subsidies**
- 11.10 Ontario Keeping Electricity Costs Down for Families**
- 11.11 Government of Canada Announces \$50 million for Ontario’s Nuclear Energy**
- 11.12 Appointment of By-law Officers**

Moved by Cunningham and Seconded by Hawkins

THAT Council receives the information items.

CARRIED.

12.0 ENDORSEABLE MOTIONS

- 12.1 Township of Amaranth: Primrose Elementary School**
- 12.2 Township of Perry: Blue Box Regulations**
- 12.3 Town of Petrolia: ROMA/OGRA**
- 12.4 Municipality of Tweed: Enbridge Gas**

13.0 ITEMS FOR FUTURE MEETINGS

- 13.1 User Fee By-law (April 2024)**
- 13.2 NDCC Survey Results (April 2024)**
- 13.3 Draft #1: Strategic Plan (April 2024)**
- 13.4 Public Meeting: Armstrong Subdivision (May 2024)**
- 13.5 Public Meeting: Development Charges & Zoning By-law (May 2024)**
- 13.6 Arena Funding Formula and User Fees (June 2024)**
- 13.7 Mono-Mulmur Townline Parking (June 2024)**
- 13.8 Council Meeting Recordings Pilot Program Results (June 2024)**
- 13.9 Fire Department Analysis (June 2024)**
- 13.10 Recreational Trailers and Property By-law Infractions (June 2024)**
- 13.11 Community Grant Application Form (June 2024)**

14.0 PASSING OF BY-LAWS

- 14.1 Appointment of By-Law Enforcement Officers**
- 14.2 Confirmatory By-Law**

Moved by Hawkins and Seconded by Cunningham

THAT By-laws 14.1 to 14.2 be approved.

CARRIED.

15.0 ADJOURNMENT

Moved by Lyon and Seconded Hawkins

THAT Council adjourns the meeting at 1:02 p.m. to meet again on April 3, 2024 or at the call of the Chair.

CARRIED.

MAYOR

CLERK



TOWNSHIP OF MELANCTHON

DELEGATION REQUEST FORM

Request for Delegation, any written submissions and background information for consideration by Council must be submitted to the Clerk's Office by 12:00 noon on the Thursday, **prior to the requested meeting.**

REQUEST DATE: March 21, 2024

NAME: Dufferin County Multicultural Foundation PHONE: [REDACTED]

ADDRESS: [REDACTED]

EMAIL ADDRESS: dcmulticulturalfoundation@gmail.com

SIGNATURE: [REDACTED]

Purpose of Delegation Request (state position taken on issue, if applicable).

I would like to present to council the 2024 multicultural event as well as request flag raising and proclamation.

REMINDER - DELEGATIONS ARE ALLOWED 10 MINUTES TO SPEAK

Personal information contained on this form is collected under the authority of *The Municipal Freedom of Information and Protection of Privacy Act*. This sheet and any additional information provided will be placed on the Council Agenda. The Agenda is a public document and forms part of the permanent public record. Questions about this collection should be directed to the Clerk at 519-925- 5525.

TOWNSHIP OF MELANCTHON
157101 HIGHWAY 10
MELANCTHON, ONTARIO
L9V 2E6

519-925-5525 Fax - 519-925-1110 Email info@melancthontownship.ca M:\M yFiles\Forms\Delegation Request Form.wpd

MAR 23 2024

DEL 19.1



TOWNSHIP OF MELANCTHON - DELEGATION REQUEST FORM

Request for Delegation, any written submissions and background information for consideration by Council must be submitted to the Clerk's Office by 12:00 noon on the Wednesday of the week **prior to the requested meeting.**

REQUEST DATE: 21- March-24

NAME: AJEET SRAN. PHONE: [REDACTED]

ADDRESS: _____

EMAIL ADDRESS: [REDACTED]

SIGNATURE: [REDACTED]

Purpose of Delegation Request (state position taken on issue, if applicable).

Want to represent my request for
getting the ~~exit~~ entrance to my property
from South of GRAND RIVER from 7th Line
Property Address. [REDACTED]
Melancthon, ON.

REMINDER - DELEGATIONS ARE ALLOWED 10 MINUTES TO SPEAK

Personal information contained on this form is collected under the authority of The Municipal Freedom of Information and Protection of Privacy Act. This sheet and any additional information provided will be placed on the Council Agenda. The Agenda is a public document and forms part of the permanent public record. Questions about this collection should be directed to the Clerk at 519-925-5525.

TOWNSHIP OF MELANCTHON
157101 HIGHWAY 10
MELANCTHON, ONTARIO
L9V 2E6
519-925-5525

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MAR 21 2024

DEL 19.2