



Agenda
The Township of Cavan Monaghan
Regular Council Meeting

Monday, December 18, 2023

1:00 p.m.

Council Chambers

Members in attendance are asked to please turn off all electronic devices during the Council Meeting. Any special needs requirements pertaining to accessibility may be directed to the Clerk's Office prior to the meeting. A link to the livestreaming is available at www.cavanmonaghan.net. Council Members may be participating remotely.

	Pages
1. Call to Order	
2. Land Acknowledgement	
We respectfully acknowledge that the Township of Cavan Monaghan is located on the Treaty 20 Michi Saagiig territory, in the traditional territory of the Michi Saagiig Anishnaabeg. We offer our gratitude to First Nations for their care for and teachings about these lands. May we honour these teachings.	
3. Approval of the Agenda	
4. Disclosure of Pecuniary Interest and the General Nature Thereof	
5. Closed Session	
6. Presentation	
6.1 Robert Lockhart - The Rethink Group, Vision 2035 - Parks and Recreation Strategic Plan	4 - 23
7. Delegations	
7.1 Rennie Lowes Re: Proposed Cell Tower 994 Mount Pleasant Road Petition	24 - 54
8. Minutes	
8.1 Minutes of the Regular Meeting held December 4, 2023	55 - 61
8.2 Minutes of the Special Council Meeting December 7, 2023	62 - 64

9.	Minutes from Committees and Boards	
9.1	Millbrook Valley Trails Advisory Committee Meeting Minutes of June 26 and September 25	65 - 70
10.	Reports	
10.1	Report - Parks and Facilities 2023-07 Vision 2035 Parks and Recreation Strategic Plan (CA)	71 - 222
10.2	Report - PEB 2023-54 Proposed Telecommunication Tower - 994 Mount Pleasant Road (KE)	223 - 299
10.3	Report - Public Works 2023-26 Former Millbrook Correctional Facility Groundwater Investigation (WH)	300 - 569
10.4	Report - Public Works 2023-27 Recommended Updates to Traffic and Parking By-law No. 2022-65 (DH)	570 - 626
10.5	Report - Corporate Services 2023-13 Cavan Monaghan Accessibility Advisory Committee Update (CP)	627 - 627
10.6	Report - CAO 2023-07 Community Safety and Well-being Plan Update (KC)	628 - 678
10.7	Report - CAO Report and Capital Status (YH)	679 - 681
10.8	Council/Committee Verbal Reports	
11.	General Business	
12.	Correspondence for Information	
13.	Correspondence for Action	
14.	By-laws	
14.1	By-law No. 2023-62 Being a by-law to regulate traffic and parking within the limits of the Township of Cavan Monaghan	682 - 704
14.2	By-law No. 2023-85 being a by-law to provide for the licencing and registration of dogs, and for prohibiting or regulating the running at large of dogs	705 - 715
15.	Unfinished Business	

- 16. Notice of Motion
- 17. Confirming By-law
 - 17.1 By-law No. 2023-86 being a by-law to confirm the proceedings of the meeting held December 18, 2023 716 - 716
- 18. Adjournment
- 19. Upcoming Events/Meetings
 - 19.1 Cavan Monaghan Public Library Board Meeting Tuesday, December 19, 2023 at 7:00 p.m. at the Millbrook Branch
 - 19.2 Regular Council Meeting Monday, January 15, 2024 at 1:00 p.m.
 - 19.3 Municipal Revitalization and Heritage Advisory Committee Meeting Thursday, January 18, 2024 at 9:00 a.m.
 - 19.4 Millbrook Valley Trails Advisory Meeting Monday, January 22, 2024 at 4:00 p.m.
 - 19.5 Special Council Budget Meeting Thursday, January 25, 2024 at 1:00 p.m.
 - 19.6 Special Council Budget Meeting Thursday, January 25, 2024 at 6:00 p.m.

Vision 2035

Parks and Recreation Strategic Plan

Township of Cavan Monaghan

Draft Report

Prepared by The Rethink Group

Leisure Services Planning and Management

Selwyn, Ontario

December 18, 2023

Purpose, Process and Engagement

Purpose: To update the 2011 Parks and Recreation Master Plan, and provide a new, more strategic plan to guide the Township for the next decade and beyond.

Process:

The Plan has been completed in **two phases** over two years.

- **Phase One** (2022) focused on research, assessment, community engagement, analysis, findings and conclusions – resulted in the **Background Report**.
- **Phase Two** (2023) continued with research & assessment, community engagement and analysis - but mostly focused on the recommendations comprising **Vision 2035**.

Community Engagement:

Household survey, other surveys (user groups, community groups, advisory committees), focus group workshop, interviews, submissions, and three Community Forums.

The Key Elements of the Strategic Plan

1. The Long-Term Vision (2050)
2. The Belief Statement
3. The 12 Guiding Principles
4. The Strategic Action Plan (including four Strategic Directions, Objectives and Actions)
5. The Supplemental Recommendations

The Belief Statement

We believe that an investment in parks, recreation and culture in the Township of Cavan Monaghan is an investment in:

- the attractiveness and appeal of our community,
- the betterment of our citizens and our community,
- the growth of the economy,
- the protection of the environment, and
- the contribution to climate change mitigation (an increasing and essential benefit).

The Twelve Guiding Principles

1. Ensure **Financial Sustainability** of Facilities, Programming and Parks and Open Space.
2. Maintain a **Community Development** Approach and Support Volunteering.
3. Support an **Active, Healthy and Engaged Community**.
4. Provide **Accessible, Inclusive and Affordable** (Leisure) Opportunities.
5. Enhance **Physical Connectedness** Throughout the Community.
6. **Complement** Rather than Compete.

The Twelve Guiding Principles

7. Continue to be **Collaborative** and Increasingly **Integrated**.
8. **Optimize** Facility Use.
9. **Cluster** High Level Outdoor and Indoor Facilities.
10. Locate for **Visibility, Prominence and Access**.
11. Be **Environmentally Responsible**.
12. Support the Alignment and Hierarchy of **Plans and Strategies**.

The Four Strategic Directions

1. Provide an Increasingly Collaborative & Integrated **Recreation and Culture Delivery System**.
2. Provide an Increasingly Enhanced and Well-Connected **Parks and Open Space System**.
3. Provide Quality **Recreation and Culture Facilities** to Meet Growing and Changing Needs.
4. Provide Quality Recreation, Sport and Culture **Programming and Community Events** (including Tournaments).

SD1: Provide an Increasingly Collaborative and Integrated Recreation and Culture Delivery System.

1.1 As the Township Grows and Evolves, **Continue to Broaden and Strengthen the Municipal Parks and Recreation Service.**

1.2 Continue to Increase the **Level of Collaboration** with Other Service Providers within the Township and Throughout the Region.

1.3 Gradually Increase the Level, Comprehensiveness and Quality of **Marketing** of Leisure Resources, Programming and Events.

SD2: Provide an Increasingly Enhanced and Well-Connected Parks and Open Space System.

2.1 Establish the following **Hierarchy of Municipal Parkland and Public Open Space**.

1. Community Parks (larger, community-wide appeal)
2. Neighbourhood Parks (smaller, close-to-home appeal)
3. Natural Heritage Open Space (ecologically sensitive)

2.2 Work Toward **Alleviating the Deficiency of Neighbourhood Parkland** in the Millbrook Settlement Area and the Hamlets. (Vision 2035 provides a way to achieve that.)

2.3 Acquire, Protect and Enhance **Natural Heritage Open Space** (existing and future public lands).

2.4 Acquire a **Large Park for Sports/Active Recreation** and/or Participate in the Provision of **Shared Regional Facilities**.

SD2: Provide an Increasingly Enhanced and Well-Connected Parks and Open Space System.

2.5 Systematically Rejuvenate and Complete Existing Municipal Parks (beginning with the CMCC, the site of the Millbrook Arena, Old Millbrook School Park and Maple Leaf Park).

2.6 Design and Develop New Municipal Parks (based on the planning guidelines in Vision 2035).

2.7 Design and Engineer Stormwater Management Properties as Community Amenities.

2.8 Dispose of Unsuitable/Surplus Parkland and Reinvest the Proceeds into Existing and New Parks.

2.9 Park and Open Space Policies are recommended to assist with future planning and park development.

SD3: Provide Quality Recreation & Culture Facilities to Meet Growing & Changing Needs.

Recommendations are provided for **24 types of culture and recreation facilities**.

For each type of facility, a **provision guideline** is provided – to help evaluate current supply and project future facility requirements to the target population of 18,000 + **specific recommendations** to address current and future needs.

A Few Examples of the 24 Facility Provision Strategies

Provide and Maintain **Pickleball Courts** to Meet the Recommended Provision Guideline of one court per 3,000 pop.

- Provide up to eight outdoor courts at the CMCC (in phases).
- Provide indoor winter courts in the proposed gymnasium at the CMCC, and summer indoor courts in the arena at the CMCC.

SD3: Provide Quality Recreation & Culture Facilities to Meet Growing & Changing Needs.

Provide and Maintain **Recreation Trails** to Meet Growing and Changing Requirements.

- Continue to expand the trail network utilizing new parkland and other open spaces.
- Continue to upgrade existing trails to improve accessibility and safety.
- Consider constructing a section of fully accessible trail.
- Support on-road cycling via sufficiently wide paved shoulders on roads that are ideal for cycling (new and rejuvenated roads).
- Continue to implement the recommendations contained in the 2010 Cavan Monaghan Trail Master Plan.

Provide and Maintain **Waterplay Facilities** to Meet the Recommended Provision Guideline of one waterplay facility per 10,000 pop.

- As the population increases toward the target of 18,000, provide two waterplay facilities (CMCC and Maple Leaf Park or Old Millbrook School Park).

SD3: Provide Quality Recreation & Culture Facilities to Meet Growing & Changing Needs.

Provide and Maintain **Outdoor Tennis Courts** to Meet the Recommended Provision Guideline of one court per 5,000 pop.

- The KPRD school board and the City of Peterborough plan to refurbish the two lit courts at Crestwood SS.
- Provide two lit courts at the CMCC (in phases).

Provide and Maintain Outdoor **Basketball/Multi-Sport Courts** to Meet the Recommended Provision Guideline of one court per 3,000 pop.

- As the population grows to the target of 18,000, provide three more basketball/multi-sport courts.
- One court should be located at the CMCC. Other candidate sites are identified.

Provide and Maintain an **Older Adult Social/Recreation/Wellness Space**. (one facility per community)

- Principle facility to be located at the CMCC, associated with the proposed expansion.

SD4: Provide Quality Recreation, Sport and Culture Programming and Community Events (including Tournaments).

4.1 As Demand Warrants, Gradually Increase the Quantity and Diversity of **Recreation, Sport and Culture Programming.**

4.2 As Facilities Improve, Encourage More **Sport Tournaments.**

4.3 As Facilities and Organization of the Arts Improve, **Expand Cultural Tourism.**

Proposed Downtown Park/Civic Square

The Property: The current site of the Millbrook Arena and the adjacent lands including Needlers Lane and possibly some of the Millbrook Conservation Area.

The Vision: Create a signature downtown park or civic square that will become a focal point and gathering place for the community. The park will be largely passive in nature and connect to the downtown commercial area, Old Millbrook School Park and the Public Library, the Millbrook Conservation Area and the Millbrook Valley Trail network - to create an inspiring open space campus within the centre of Millbrook.

The Process: in 2024, constraints and opportunities will be identified, the area will be further imagined, and a conceptual plan will be prepared with input from stakeholders and the community - and informed by recommendations contained in Vision 2035.



Cavan Monaghan Community Centre

General Site Plan for the Cavan Monaghan Community Centre



Proposed Facilities

Indoor Facilities:

- A two-storey facility
- Single or double gymnasium (gymnasium/community event space/performance venue)
- Fitness/Wellness centre
- Changerooms to support the gym and fitness facilities
- Flexible multipurpose program/meeting space
- Dedicated older adult social/recreation facility
- Storage to support existing and new facilities
- Additional administration space
- General public spaces (washrooms, food services, expanded foyer, etc.)
- Mechanical and circulation

Outdoor Facilities:

- A signature waterplay facility
- Four pickleball courts with room set aside to expand to eight as demand warrants
- A full basketball multi-sport court
- A tennis court with room set aside to expand to two with lighting as demand warrants
- Two beach volleyball courts with room set aside to expand to four as demand warrants
- A 372m² (4,000ft²) skateboard facility with room to expand to 650m² (7,000ft²) in the future
- A gazebo/shade structure/picnic pavilion
- A hard-surfaced pathway that provides access to this recreation area from the developing community to the west
- Additional parking to support current uses and the new outdoor and indoor facilities

Note:

The plans for outdoor facilities and the proposed expansion of the community centre will be further developed via the planning and design process proposed for 2024.

Figure 6-4: General Site Plan for the Cavan Monaghan Community Centre and Associated Lands

Funding Strategy

Grants (e.g., Ontario Trillium Foundation; Jays Foundation; other foundations that support culture, recreation, sports, etc.; accessibility grants; close to 150 arts and culture grants; occasional federal/provincial grant programs; etc.). Federal/provincial grant programs are irregular, vary by focus, and usually encourage project partnerships and climate change mitigation features.

Development charges and cash-in-lieu of parkland associated with residential, commercial and industrial development and redevelopment projects.

Park Reserve Account (can be funded through an annual tax-based contribution, and by cash-in-lieu of parkland contributions).

Sponsorship and naming rights (entire buildings, individual components of buildings, entire parks, individual outdoor facilities).

Funding Strategy

Community fundraising for specific capital projects that have wide community appeal.

Planned Giving - the act of leaving a charitable gift to a chosen party, cause or organization as a way to honour the donor's life. It usually comes in the form of money, assets or property, and may or may not be included in the person's Will.

Municipal tax levy - investments in capital and other initiatives are decided annually, based on plans like Vision 2035.

Municipal debentures.

Proceeds from the sale of surplus/redundant parkland.

Some of the Top Priority Initiatives

1. Plan and design the proposed **downtown park**.
2. Complete the planning and design of the **Cavan Monaghan Community Centre** and associated lands.
3. Complete the upgrade of **playgrounds** to meet safety standards.
4. Establish a **Committee of Council** to represent culture, recreation and parks.
5. Continue to explore opportunities for **shared regional culture and recreation facilities**.
6. Begin to **develop the remaining lands at the CMCC**, based on the approved plan and the recommended implementation strategy (waterplay facility likely first).
7. Formally designate the highest priority **Township-owned, non-parkland open space properties** as parkland.



Questions

From: noreply@esolutionsgroup.ca
To: [Cindy Page](#); [Karlie Cornish-Tkalec](#)
Subject: New Response Completed for Council Delegation Form
Date: December 11, 2023 12:12:52 PM

Hello,

Please note the following response to Council Delegation Form has been submitted at Monday December 11th 2023 12:11 PM with reference number 2023-12-11-002.

- **Date:**
12/11/2023
- **Meeting Date:**
12/18/2023
- **Subject:**
Project # 22-D-6166 proposed rogers EORN Tower - 994 Mount Pleasant Rd.
- **Name of Delegate:**
Rennie Lowes
- **Name of the Community Group/Organization:**
Proposed Cell tower at 994 Mount Pleasant Rd Petition
- **Address:**
1177 Hayes Line
- **City:**
Cavan
- **Province:**
ON
- **Postal Code:**
L0A 1C0
- **Phone Daytime:**
705-760-3818

Phone Evening:

705-760-3818

- **Email:**

rennie.lowes@gmail.com

- **Do you require any Accessibility Accommodation?**

No

- **Detailed statement of what you are seeking from Council.**

Present council with the cell tower petition. The community was not fairly notified or made aware of such a landscape change or provide the chance to have their voices and opinions heard. The fact proper consultation with residences was not completed, flood plains and/or PSW boundaries have never been certified or properly acknowledged through octad on site measurements (map review is not a certified study). Consideration for wild life and water fowl was not considered or proper studies performed for species risk in the area so close to a PSW (Cavan swamp). Health and safety concerns were never addressed. It is also the hopes of those in attendance to have our voices heard at council since we were allowed to speak and address our position on Nov 20th however we were not allowed any follow up questions or points of clarification which we would respectively ask council to consider as outlined in the Delegation request.

- **Do you have any documentation (i.e. Powerpoint presentation, letter, memo, photo etc.) that you would like to provide/make to Council**

Yes

- **Please include any documentation/presentation (i.e. images, brochures, correspondence etc.) material that will be attached to your deputation.**

1. [SKM_C360i23121111450.pdf \[2.4 MB\]](#)

[This is an automated email notification -- please do not respond]

Proposed Cell Tower at 994 Mount Pleasant Road Petition

We, the undersigned, petition the members of Township of Cavan Monaghan Council to vote in favour of a submission of non-concurrence to the ISED for the proposed cell tower at 994 Mount Pleasant Road in the Township of Cavan Monaghan. As presented to Township Council by a number of delegates on November 20, 2023 the proposed Cell Tower at 994 Mount Pleasant Road does not fit into the Mount Pleasant Community.

We are looking for you, Members of Council, to be our voice and demand better for your local constituents.

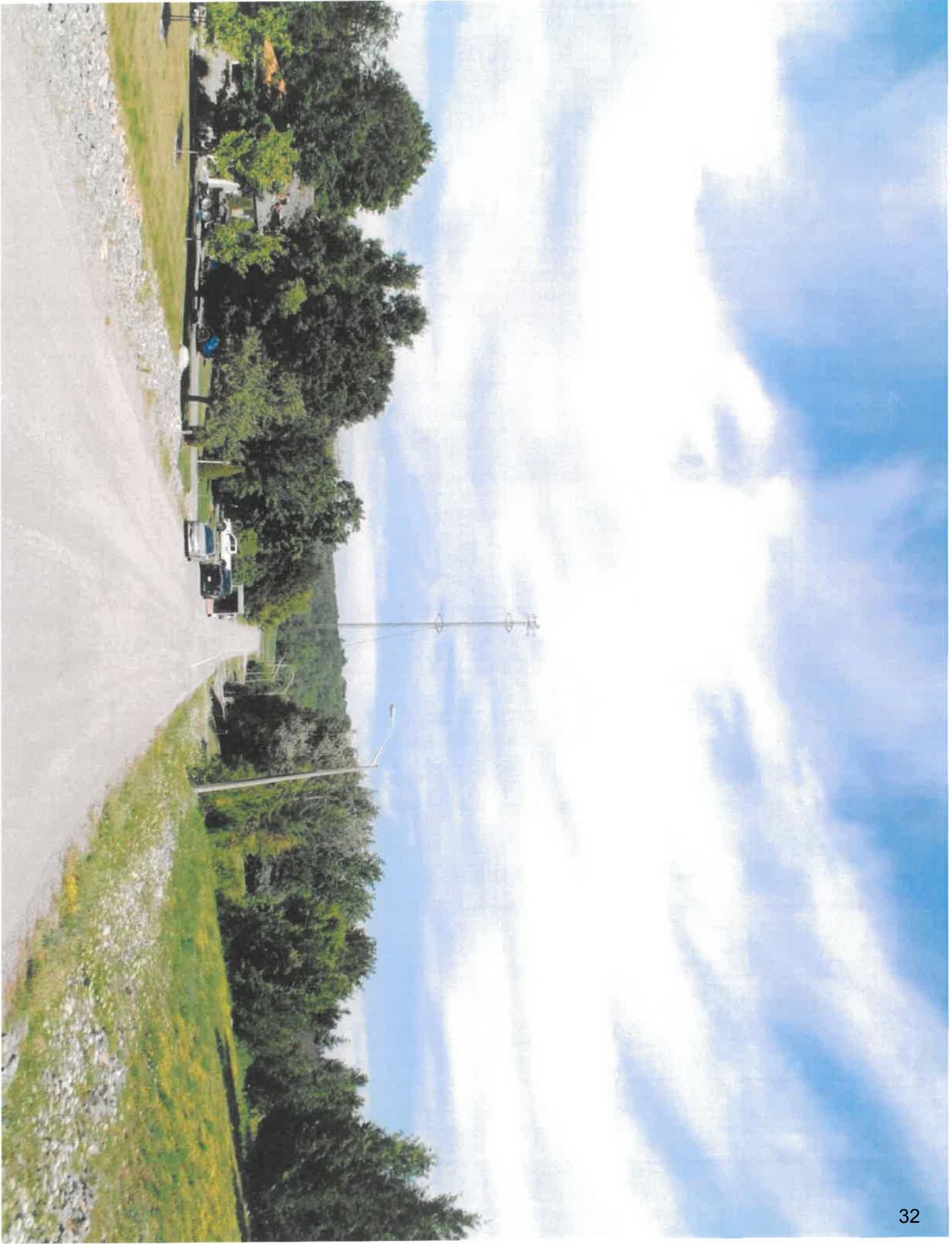
Name	Signature	Address	Email or Phone
PETER MALONEY	<i>[Signature]</i>	2394 Kennedy Dr.	905-869-4419
Peggy Maloney	<i>[Signature]</i>	2894 KENNEDY DR.	905-213-8185
Mike Davern	<i>[Signature]</i>	2390 Kennedy Dr	705-872-6209
Natalie Davern	<i>[Signature]</i>	2310 Kennedy Dr	nat.smith126@hotmail.com
Pat Davern	<i>[Signature]</i>	1045 Mount Pleasant Rd	705-749-9257
Murray Davern	<i>[Signature]</i>	1045 Mount Pleasant Rd	705-745-6676
Zblyk Naruszk	<i>[Signature]</i>	2382 Kennedy Dr	416 317 6454
Alicja Naruszk	<i>[Signature]</i>	2322 KENNEDY DR	705 808 5595
BEN NAPUSZKO	<i>[Signature]</i>	2382 Kennedy DR	705 808 5593
Kristen Short	<i>[Signature]</i>	1025 Rose Crescent	905-925-0236
Mike Nielsen	<i>[Signature]</i>	1033-ROSE CRESCENT	905-802-6865
Peter Lusk	<i>[Signature]</i>	1049 Rose Crescent	705-772-7552
Amylar Wood	<i>[Signature]</i>	463 Mt Pleasant Rd	705 768 8157
Suzanne Howard	<i>[Signature]</i>	935 MILL ST	705 799 0260
Milo Riley	<i>[Signature]</i>	925 Blue Jay St	905-373-3603
Connie Comar	<i>[Signature]</i>	925 Blue Jay St	705-933-7195
Mike Comar	<i>[Signature]</i>	925 Blue Jay St.	905-269-5140
Jim Adams	<i>[Signature]</i>	929 BLUE JAY ST.	705 760 1770
Janet Bass	<i>[Signature]</i>	929 Blue Jay St.	705-761-6021
Natasha Silva	<i>[Signature]</i>	2398 Queen Mary St	905 914 0393
CHRISTINA EASTERLING	<i>[Signature]</i>	2435 Kennedy Dr. Cavan	705-772-0750
GORD McFARLANE	<i>[Signature]</i>	1077 Mt Pleasant Rd Cavan	705-931-4185
Jen McFarlane	<i>[Signature]</i>	" " " " "	705-868-9194
Matt Griffin	<i>[Signature]</i>	1083 Mount Pleasant Rd Cavan	705-875-5774
Leanna Gifford	<i>[Signature]</i>	1053 Mount Pleasant Rd	705-875-4424
J. TUMMARDIS	<i>[Signature]</i>	943 Mt. Pleasant Rd.	705-768 5226
M Tummardis	<i>[Signature]</i>	"	"

Proposed Cell Tower at 994 Mount Pleasant Road Petition

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We are looking for you, Members of Council, to be our voice and demand better for your local constituents.

Name	Signature	Address	Email or Phone
Julie MacPherson		2396 Kennedy Dr Cavan	705-749-7372
TOM MACPHERSON		2396 KENNEDY DR. CAVAN	tjmac@nexcom.net
Tim Wilson		2403 KENNEDY DR. CAVAN	705-760-4966
BRIK Wilson		2403 KENNEDY DR. CAVAN	705-760-3166
Katherine Kollaard		2411 Kennedy Dr. Cavan	289 923 3365
TOM KALLAARD		2411 KENNEDY DR. CAVAN	416 460 1043
Clayden Kollaard		2411 Kennedy Dr. Cavan	519-897-0563
STEVE BLACKBURN		2408 KENNEDY DR CAVAN	705-957-9974
Andrew Blackburn		2408 Kennedy dr CAVAN ON	705-957-9984
RÉX BRIFFÉTT		214 Kennedy Dr CAV	705-760-3086
Rock M. Conroy		2423 Kennedy Dr Cavan	705 930 3499
Diane McLaughlin		"	705 572 6829
Doreen McLaughlin		2432 Kennedy drive	705 557 1917
Brock Eusterling		2435 Kennedy drive	705 934 2515
Liz Luchante		1049 Rose Cres (Privay), CN	705 772-9374
Mike Huskin		1025 Rose Cres	343-263-3000
Ren Hudson		1617 Rose Cr.	705 313 0566
Mark Ellsoid		2440 Kennedy drive	705 802-0003
Mary Roffey		2448 Kennedy Dr	705 875 1151
Scott Darville		2448 KENNEDY DR	705 927 5070
Paul MacRae		2384 Kennedy Dr	905 391 1784
Lynn Dinnell		979 Mt Pleasant Rd	905 353 6141
Jason Gardner		995 Mt. Pleasant Rd	705-930-5251
Guinevere Gardner		985 Mt. Pleasant Rd	705-313-4403
Jennifer Kimball		985 Mt. Pleasant Rd	705-957-3374
Jay Gardner		985 Mt. Pleasant Rd	705-313-4469
Emma Collinson		2399 Kennedy dr	705 872-2328







Further
Articles
For
Council
Consideration



PHYSICIANS FOR SAFE TECHNOLOGY

Physicians for Safe Technology



Wildlife and Biodiversity: A Disappearing Act by Cell
Towers on Land and in Space?



Calling all environmentalists! The most important and thorough peer reviewed article to date

on environmental effects of wireless radiofrequency radiation was published in 2021 and deserves a full read. This has been followed by other **publications**, as well as an eye opening 2023 legal and **policy webinar** on wireless radiation and wildlife that should be a call to action for all groups interested in biodiversity and planetary health. What do we know about wireless radiation effects on the natural environment? The comprehensive **3 part review by Levitt, Lai and Manville (2021)** provides a wealth of scientific information, connecting the scientific dots of radiofrequency radiation (RFR) harm to all flora and fauna. In a very readable text the authors answer many puzzling questions about this complex subject that combines biology, ecology, technology and physics. A shorter summary article was published in 2022 titled, **Low-level EMF effects on wildlife and plants: What research tells us about an ecosystem approach.** The authors warn, ***"It is time to recognize ambient EMF as a novel form of pollution and develop rules at regulatory agencies that designate air as 'habitat' so EMF can be regulated like other pollutants."*** Public Employees for Environmental Responsibility (PEER) has weighed in as well with **comments in 2017 and 2022** on the rewriting of policies on cell tower placement in public land and National parks.

Most of us are aware that human activity has drastically altered the terrestrial and marine environment causing an accelerated decline in species and biodiversity by land degradation, over-harvesting, plastic and chemical pollution, and the extraction and use of fossil fuels. Environmental scientists all agree that transformative change is necessary in these areas. But what happens to the environment when humans alter the Earth's previously low-level geomagnetic forces that life evolved harmoniously in? Can cell towers and proliferating 5G satellites impact species that depend on the Earth's magnetic fields for **navigation**, foraging, pollination and reproduction? What are the effects on climate change? Read below for links and summaries of the 3 part article.

One of the authors of the article, former USFWS senior wildlife biologist and adjunct professor at John Hopkins University, Albert Manville, explained the critical need to protect birds and bats, impacts from cell towers, wind turbines and solar arrays, as well as research on effects of radiofrequency radiation in **My Life for the Birds & Bats**. This informative and eye opening talk was sponsored by Friends of Merrymeeting Bay's (FOMB) for their 26th annual Winter Speaker Series in 2023.

Updated 11/16/23

NEW 7/20/23 Webinar Science, Legal and Policy Webinar on Wildlife and Wireless Radiation: The Ecosystem and Environmental Impacts of Cell Towers and Electromagnetic Radiation.

An expert panel of researchers was convened in July 2023 to discuss the current state of research and policy needs regarding wildlife, national parks and the increasing planetary threat of expanding telecommunications, including untested 5G deployment. Highly engaging and concise information was presented for the first time. The speakers include **Albert M. Manville II PhD.**, a retired senior wildlife biologist at the U.S. Fish & Wildlife Service; **B. Blake Levitt**, an award-winning medical/science journalist and acclaimed author; **Daniel Favre, PhD.**, Wildlife Biologist; **Dr. Cornelia Waldmann-Selsam**, researcher who discusses the impacts of radiofrequency radiation on trees; **Erica Rosenberg**, retired Assistant Chief of the Competition and Infrastructure Policy Division at the Federal Communications Commission (FCC) and **Devra Davis PhD., MPH**, President of Environmental Health Trust. Hosted by **Theodora Scarato, MSW**, Executive Director of Environmental Health Trust. **Excerpts below:**

“It is these exact RFR bands between 30 KHz and 3 GHz used in telecommunications technology that have increased during this period of accelerating wildlife disappearance. No other pollutant has increased in parallel like this.” Blake Levitt

“There are no exposure standards for wildlife species by any standards setting group.” Blake Levitt

“We must refund the U.S. EPA and the U.S. Fish and Wildlife Service to investigate this work.” Blake Levitt

NEW Webinar October 29, 2023 – SCIENCE, POLICY AND LAW OF 5G, 4G AND WIRELESS: THE HEALTH AND ENVIRONMENT IMPACTS.

Environmental Health Trust. Oct 29, 2023. Thorough but concise review and presentations of the issues with international experts.

Speakers * Rob Brown MD– Orthopedic radiology specialist * **Blake Levitt**- Medical and science journalist * **Devra Davis Ph.D. MPH**- President of Environmental Health Trust * **Theodora Scarato**-Executive Director of Environmental Health Trust * **Kent Chamberlin**, Past-Chair and Professor Emeritus in the Department of Electrical and Computer Engineering, University of New Hampshire. * **Joe Sandri**- Telecommunications Attorney.

New 2022 Environmental Procedures at the FCC: A Case Study in Corporate Capture.



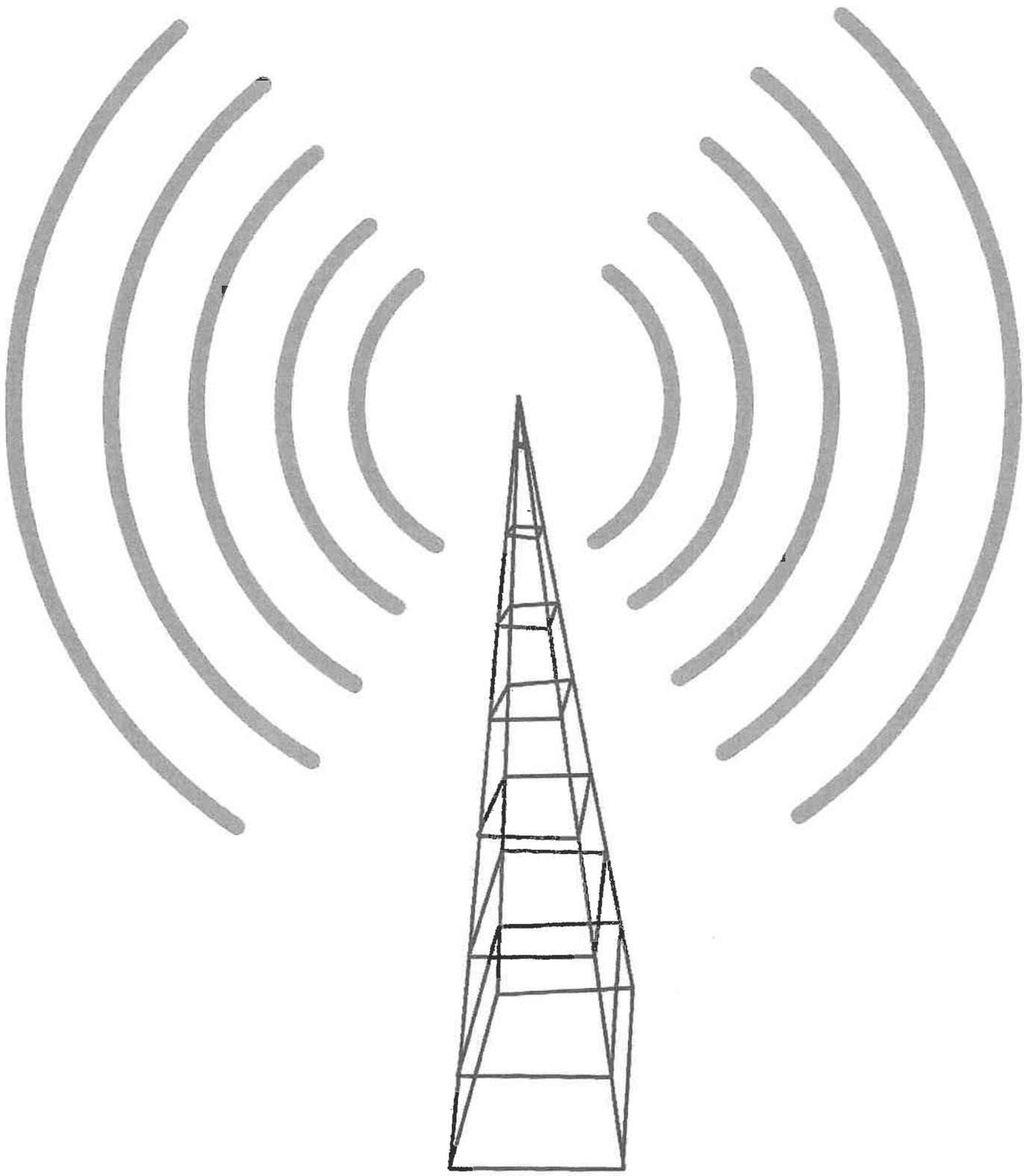
PHYSICIANS FOR SAFE TECHNOLOGY

Physicians for Safe Technology

Cell Tower Removed After 4th Ripon Student Diagnosed with Cancer

MARCH 25, 2019





After 4 students and 3 teachers were diagnosed with cancer within a 3-year period, Sprint finally removed a cell tower at a Ripon, California school. While it is exceedingly difficult to identify the cause of a **cancer cluster**, parents and students in the San Joaquin County school are convinced there is one and it is caused by the campus cell tower. They are not only protesting but several have abandoned the small school which now features 4 rare

cancers in students -2 brain tumors, one kidney cancer and one liver cancer. Investigations of not only cell tower radiation but also **water quality** have been initiated. After 200 parents stormed the school board meeting, school officials were prompted to ask for the cell tower to be removed at the K-8 school. Sprint has agreed to do so.

Update 07/23/22

Parents Opposed the Cell Tower Before it was Placed

The cell tower was placed at Weston Elementary School 10 years ago and a group of parents opposed the cell tower construction before it was erected, citing health concerns. According to news reports, they have another 15 years left on the 25-year lease with a rental fee of about \$2,000 per month paid to the school. A **GO PETITION** to have the cell tower removed was initiated in 2017 after 2 children in the school developed cancer.

Radiofrequency Levels Are Within FCC Guidelines

Officials have maintained that the radiofrequency radiation levels were below the federal standard when measured and they are in compliance. Questions remain about the safety of cell towers, as well as the current standards, which many experts state are not protective of human or environmental health. Current FCC regulations for human exposure are based on heating of tissues and short term exposures, not harmful biological effects demonstrated at much lower levels in the scientific literature. The FCC reevaluation standards were **successfully challenged in 2021** in a DC court but no action has been taken. In addition the European Parliamentary Assembly called for precaution and reduction of RFR, especially for children, in 2011 with passage of **Resolution 1815**.

Even though the cause of any particular cancer may never be determined is there scientific evidence that removing the cell tower and taking this precautionary approach is warranted?

Schools Average Radiation Levels Rather Than Considering Peaks

Schools such as those in **New Zealand** and **Los Angeles** have measured RF radiation and stay the levels are far below government guidelines, however, they average the RF levels,

and have not considered peak “modulated” spiked pulsations, which are the **most** biologically harmful. Consider that a peak pulse can be like a bullet piercing a cell membrane. The duration may be short but the tissue injury is great and lasting. These long term effects of constant pulsed (modulated) radio frequency radiation on brain cells, our reproductive systems and metabolism have not been considered and averaging veils the true harm.

LAUSD Radiofrequency Evaluation Reports: Office of Environmental Health and Safety. All Reports. Use of Wireless Devices in Education all Settings- They state the levels are 10,000 lower than limits (averaged) **here**.

Is Cell Tower Radiation a Toxin?

Cell towers as well as Wi-Fi create continuous emissions of pulsed microwave radiation. Microwave ovens which use similar radiofrequencies at higher power cook by heat, however, at lower power adverse biological effects have been demonstrated in scientific studies without heating or burning the tissue. One mechanism of toxicity that has been clearly shown is oxidative damage, seen in 93 of 100 scientific studies (**Yakymenko 2016**). Oxidation is a common mechanism of toxicity found in pollutants such as pesticides, industrial chemicals, cigarette smoke and heavy metals. These pollutants can trigger inflammation and damage to cell structures such as DNA, mutations of which can be a precursor to cancer.

Wireless radiation passes through and is absorbed in the body and organs and thus, like chemical toxins which are ingested, inhaled or absorbed through the skin, they can potentially cause broad harm to cellular structures and internal organs. Damage from RFR is cumulative, as it is with ionizing radiation and other toxic exposures. The longer the exposure the more harm. Toxic exposures can act separately or in combination synergistically to cause illness or cancer (co-carcinogenesis). Effects are non-linear and due to individual variation in genetics, nutrition and health.

Cell Towers and Cancer

In 2011, the WHO International Agency for Research on Cancer (IARC) listed radiofrequency radiation (RFR) as a Class 2B Possible Carcinogen. Scientists have argued that considering

the current level of published research on brain tumors and radio frequency radiation that RFR **should be listed** as a Class 1 Known Carcinogen. The National Toxicology Program **(NTP) Study on Cancer and Cell Phones** announced their findings in 2018, after 10 years of research on RFR, and showed DNA damage (a precursor to cancer) and clear evidence of carcinogenicity of wireless radiation emissions. They demonstrated in carefully conducted studies a significant increase in tumors of internal organs including the heart, brain and adrenal medulla (which sits just above the kidney). Another worrisome finding from the **NTP** was the development of aging of the heart in the exposed cohort.

Cell Towers as a Co-Carcinogen

Scientific evidence indicates that exposure to multiple environmental pollutants, especially over time can increase the risk of diseases such as cancer. Some toxins exert their effects in certain windows of development. Some are tumor initiators and some can be tumor promoters. It is a complex area of scientific endeavor. Combined toxic exposures are unfortunately incompletely studied as it would take geologic time to examine the 80,000 plus chemicals in varying assortments along with radiofrequency radiation. Dr. Ross Adey concluded, however, in a 1990 review, that based on a new understanding of the biology of cancer at a cellular level and available studies, that non-ionizing electromagnetic fields "acting alone or in conjunction with chemicals that occur as environmental pollutants may constitute a health hazard".

Considering at least one shared mechanism of toxicity between chemicals and RFR, cellular membrane effects and the many studies performed this should be, as Dr. Adey states, "a matter of urgency" in terms of research and public policy.

Stem Cells and Cancer : Effects Seen Below Current Safety Standards

Markova(2010) Looked at effects of low power microwaves from mobile phones on human derived stem cells, which are widely dispersed in the body. He found that DNA repair foci in mesenchymal stem were significantly altered at levels 40 times less than current guidelines. He highlighted that mesenchymal stem cells are at higher risk of malignant transformation than differentiated cells. The author concludes, "*Because almost all organs and tissues possess stem cells and because stem cells are more active in children, the possible relationship of chronic MW exposure and various types of tumors and leukemia—especially in children—should be*

5G, CELL TOWERS AND WIRELESS

DECREASED PROPERTY VALUE



"An overwhelming 94 percent of home buyers and renters surveyed by the National Institute for Science, Law & Public Policy (NISLAPP) say they are less interested and would pay less for a property located near a cell tower or antenna."

"of the 1,000 survey respondents, 79 % said that under no circumstances would they ever purchase or rent a property within a few blocks of a cell tower or antennas, and almost 90% said they were concerned about the increasing number of cell towers and antennas in their residential neighborhood."

"Cell Towers, Antennas Problematic for Buyers"
— Realtor Magazine

A study published in the Journal of Real Estate Finance and Economics found that for properties located within 0.72 kilometers [2362 feet] of the closest cell tower, property values declined 2.46% on average, and up to 9.78% for homes within tower visibility range compared to homes outside tower visibility range.

"In aggregate, properties within the 0.72-kilometer band lose over \$24 million dollars."

"In some areas with new towers, property values have decreased by up to 20%."

- **"Your new neighbor, a cell tower, may impact the value of your home"** National Business Post, 2022.

"...cell towers are concerning to many people and drop property values."

"While most states do not require disclosure of neighborhood nuisances, such as cell towers or noisy neighbors, a few states do, and more are likely to in the future."

— **Real Estate Attorney, South Florida Sun Sentinel, 2021**

The California Association of Realtors' Property Sellers Questionnaire specifically lists "cell towers" on the disclosure form for sellers of real estate.

— **Click to go to the California Association of Realtors' Property Sellers Questionnaire (p. 3-4 under K. Neighborhood)**

[PDF is hyperlinked. More on property values at ehtrust.org](https://ehtrust.org)

ENVIRONMENTAL HEALTH TRUST | EHTRUST.ORG

ENVIRONMENTAL
HEALTH TRUST 44

5G, Small Cells & Cell Towers Can Drop Property Values

Would you buy a home with cell antennas outside the bedroom window?



Legal filings by cities and municipalities to the FCC highlight how small cell deployment could impact aesthetics and property values.

"many deployments of small cells could affect property values, with significant potential effect..."

— Reply Comments of Smart Communities Siting Coalition (local governments and associations representing 1,854 communities) 4/7/2017, Docket No. 16-421, April 7, 2017

"Considering that the Smart Communities' prior filings show that the addition of facilities of this size diminish property values, it is strange for the Commission to assume that approval can be granted in the regulatory blink of an eye...."

"...allowing poles to go up in areas where poles have been taken down has significant impacts on aesthetics (not to mention property values)."

— *Ex Parte* Submission of Smart Communities Letter to Ms. Marlene H. Dortch, Secretary, Federal Communications Commission, September 19, 2018

"While the magnitude of the impact varies, the studies uniformly indicate that there is a significant impact on residential property values from installation of cell phone towers..."

— Report and Analysis by David E. Burgoyne, ASA, SR/WA Certified General Real Estate Appraiser to the FCC in Docket 16-421



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POWERLINES AND CELL ANTENNAS LOWER PROPERTY VALUES

Research finds, cell towers, high powered powerlines and electric substations near homes can drop property values up to 20%.

“Cellphone towers bring extra tax revenue and better reception to a section of the city, but many are skeptical because of the potential health risks and the impact on property values. Increasing numbers of people don’t want to live near cell towers. In some areas with new towers, property values have decreased by up to 20%.”

-National Business Post: Your new neighbor, a cell tower, may impact the value of your home 2022

A study published in *the Journal of Real Estate Finance and Economics* found that for properties located within 0.72 kilometers [2362 feet] of the closest cell tower, property values declined 2.46% on average, and up to 9.78% for homes within tower visibility range compared to homes outside tower visibility range. “In aggregate, properties within the 0.72-kilometer band lose over \$24 million dollars.”

Download EHTs two page factsheet on 5G, Cell Towers and Property Value which is hyperlinked to the source on property value drops from 5G and cell towers.

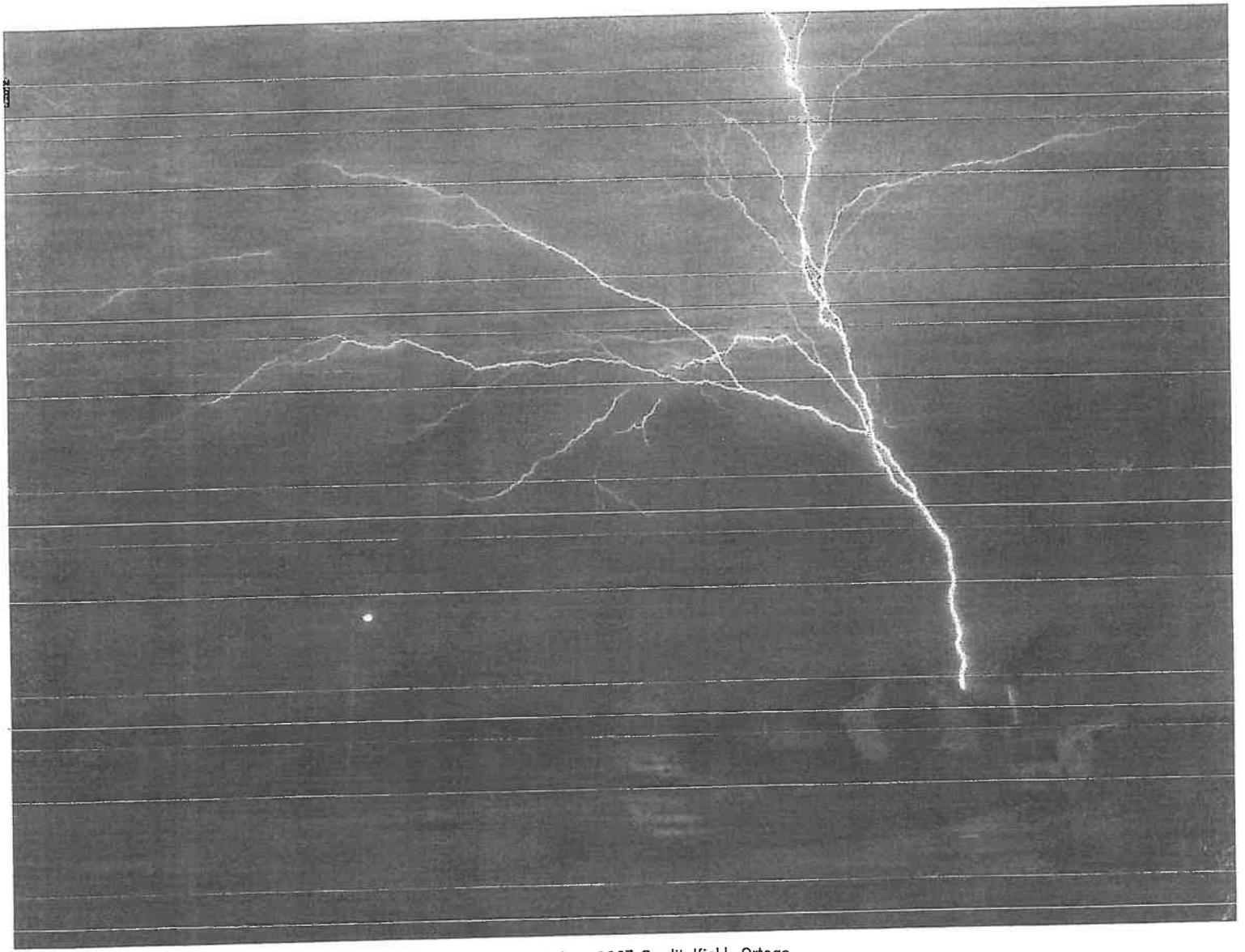


Eos

Antenna Towers Attract Additional Lightning Strikes

Atmospheric scientists evaluate the influence of human-made structures on lightning data.

By S. Witman
26 May 2017



Tower-initiated lightning observed from a Wichita, Kan., neighborhood on 9 June 2007. Credit: Kiel L. Ortega

Ontario Physician and Scientists Predict

Rising Healthcare Costs after

5G Roll Out.

Media Briefing, Queen's Park
Thursday 30 May 2019
1 PM.

TRANSCRIPT:

Dr. Riina Bray MD: Dr. Bray is trained as a chemical engineer and doctor of medicine with Masters degrees in addictions, toxicology and public health. She is Assistant Professor in the Department of Family and Community Medicine with cross appointment to the Dalla Lana School of Public Health, at the University of Toronto, and she is the Medical Director of the Provincial Environmental Health Clinic at Women's College Hospital.

Magda Havas PhD: Dr. Havas is Professor Emeritus at Trent University in Peterborough, Canada. She is internationally recognized for her research on the biological effects of electromagnetic pollution and on the beneficial effects of electrotherapies. She is co-author of *Public Health SOS: The Shadow Side of the Wireless Revolution*; she has more than 190 publications and has given invited lectures in 30 countries. Dr. Havas works with people who are electrically hypersensitive. Her latest research links microwave radiation from wireless phones to heart irregularities including arrhythmia and tachycardia.

Dr. Anthony Miller MD: Dr. Miller is Professor Emeritus at the Dalla Lana School of Public Health at the University of Toronto. He has acted as adviser to the International Agency for Research on Cancer, from whom he has also received a Medal of Honour. He has worked in senior positions for the National Cancer Institute of Canada and his appointments and honors date are numerous and date back to the 1960s. Dr. Miller is considered a globally recognized authority on cancer in his field.

Meg Sears PhD: Dr. Sears holds a PhD in biochemical engineering. She is associated with The Ottawa Hospital Research Institute. She has also been a scientific advisor to the Canadian Human Rights Commission, the National Research Council and other governmental bodies. She is currently Chair of Prevent Cancer Now, a national organization identifying substitutes to carcinogenic substances and agents in our daily lives.

Frank Clegg, Moderator: Frank Clegg is CEO of Canadians For Safe Technology (C4ST), a Canadian organization that advises all levels of government about safer uses of modern technology. He spent his career in information technology including a period at IBM, and 14 years as President of Microsoft Canada.



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Electromagnetic Field Insurance Policy Exclusion Are The Standard

- Insurers rank 5G and electromagnetic radiation as a “high” risk, comparing the issue to lead and asbestos. A 2019 Report by Swiss Re Institute, a world leading provider of insurance,⁴² classifies 5G mobile networks as a “high”, “off-the-leash” risk stating, “Existing concerns regarding potential negative health effects from electromagnetic fields (EMF) are only likely to increase. An uptick in liability claims could be a potential long-term consequence” and “[a]s the biological effects of EMF in general and 5G in particular are still being debated, potential claims for health impairments may come with a long latency.”
- Due to their understanding of the magnitude of this future financial risk most insurance plans have “electromagnetic field exclusions” applied as the market standard.⁴⁰ Portland Oregon Public School Insurance⁴¹ (Pg 30) states as an example, “Exclusions: This insurance does not apply to: Bodily injury, personal injury, advertising injury, or property damage arising directly or indirectly out of, resulting from, caused or contributed to by electromagnetic radiation, provided that such loss, cost or expense results from or is contributed to by the hazardous properties of electromagnetic radiation.”
- US Mobile operators have been unable to get insurance to cover liabilities related to damages from long term exposure to radiofrequency emissions for over a decade.

Electromagnetic Sense Ireland

Feb 2015 – LLOYD'S OF LONDON INSURANCE EXCLUDES LIABILITY FOR ELECTROMAGNETIC RADIATION

Posted on March 27, 2015 by ES-Ireland

EXCLUSIONS

We will not

- a) make any payment on your behalf for any claim, or
- b) incur any costs and expenses, or
- c) reimburse you for any loss, damage, legal expenses, fees or costs sustained by you, or
- d) pay any medical expenses:

GENERAL INSURANCE EXCLUSIONS:

- 32. **Electromagnetic fields**
directly or indirectly arising out of, resulting from or contributed to by electromagnetic fields, electromagnetic radiation, electromagnetism, radio waves or noise.

Lloyd's of London has now excluded any liability coverage for injuries, "directly or indirectly arising out of, resulting from or contributed to by electromagnetic fields, electromagnetic radiation, electromagnetism, radio waves or noise."

On February 18, 2015, the UK agent for Lloyd's stated,

"the Electromagnetic Fields Exclusion (Exclusion 32) is a General Insurance Exclusion and is applied across the market as standard. The purpose of the exclusion is to exclude cover for illnesses caused by continuous long-term non-ionizing radiation exposure i.e. through mobile phone usage."

School officials could be personally liable for exposing children and staff to microwave radiation (from wifi etc) in our schools.

More information:

<https://www.rfsafe.com/lloyds-of-london-insurance-wont-cover-smartphones-wifi-smart-meters-cell-phone-towers-by-excluding-all-wireless-radiation-hazards/>

<http://stopsmartmeters.org.uk/lloyds-of-london-excludes-liability-coverage-for-harm-from-wireless-radiationrf-emf>

Reports & White Papers Of Insurance Industry On Electromagnetic Radiation Health Risks And Liability

<https://ehtrust.org/key-issues/reports-white-papers-insurance-industry/>

This entry was posted in [Uncategorized](#). Bookmark the [permalink](#).

Dr. Magda Havas, PhD.

*PROFESSOR EMERITUS AT TRENT UNIVERSITY
PETERBORO*

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[Biography](#) - [Contact Dr. Havas](#)

Health Canada admits Safety Code 6 guideline for microwave radiation is based ONLY on thermal effects!



February 20, 2013. I just returned from a hearing in Montreal in front of the **Superior Court of Quebec** where Health Canada scientist, **James McNamee**, admitted that the Safety Code 6

guideline for microwave radiation (which includes radiation from most of the devices we are concerned about like mobile phones, cell phone antennas, Wi-Fi, wireless toys and baby monitors, smart meters etc.) is based **ONLY** on preventing a heating effect!



Health Santé
Canada Canada

Let me state that again. **Health Canada admits that Safety Code 6 for frequencies between 100 kHz and 300 GHz are based ONLY on heating.**

Search ...

GO

Zory's Archives

The History of the Health Effects from RF and Microwave Radiation from the Archives of Zory Glaser



Dr. Zory R. Glaser Ph.D., LT, MSC, USNR
Former U.S. Navy Researcher, NIOSH Manager
Executive Secretary Advisor to the U.S. FDA

[Click here to view the Archives](#)

Featured Video

Why is this so important?

For years Health Canada has stated that Safety Code 6 takes into consideration and protects the public from both thermal and non-thermal effects. They made this statement to groups concerned about Wi-Fi in schools and to those concerned about smart meters and cell towers coming into their neighborhoods. While they are technically correct in their statement, they mislead the public by what they failed to mention. What Health Canada failed to mention is that the “non-thermal” effects are considered ONLY for frequencies between 3 and 100 kHz. For frequencies between 100 kHz and 300 GHz ONLY thermal effects are considered and cell towers fall within this “thermal range.”

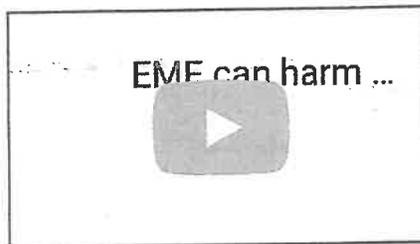
That is not the only thing that was novel and refreshing at this hearing.

This is the first time a provincial court (Superior Court of Quebec) has challenged the right of municipal governments to address health concerns expressed by citizens regarding federally regulated radio frequency radiation.



Let me explain what this hearing is about. It is a story concerning **Rogers and the City of Chateauguay**.

Rogers wanted to erect a monopole tower (**35 meters tall**) with **multiple antennas** in a residential section of the City of Chateauguay in Quebec within **15 meters** of the nearest property line. We have regulations in Canada that for towers taller than 15 meters, the wireless provider has to hold a public meeting. The meeting was held and those who lived nearby expressed their concerns about health effects associated with the radiation from this proposed tower.



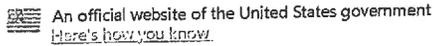
Click here to visit the Dr. Magda Havas Youtube Channel

Things On My Mind

Tweets by @MagdaHavas

News Categories

- 5G and mm waves
- Antennas & Towers
- Cancer
- Covid-19
- Diabetes
- Dirty Electricity
- Doctors/Health Professionals
- Dr. Havas Conferences
- Dr. Havas Interviews
- ElectroSensitivity
- Electrosmog Exposure
- EMF Inspectors
- EMF Organizations
- EMF Products
- Environmental Health
- From Zory's Archive
- Ground Current/Stray Voltage
- Health Issues
- Home Environment
- Infertility



FULL TEXT LINKS



Front Public Health. 2022 Nov 25;10:1000840. doi: 10.3389/fpubh.2022.1000840. eCollection 2022.

Low-level EMF effects on wildlife and plants: What research tells us about an ecosystem approach

B Blake Levitt ¹, Henry C Lai ², Albert M Manville 2nd ³

Affiliations

PMID: 36505009 PMCID: PMC9732734 DOI: 10.3389/fpubh.2022.1000840

Free PMC article

Abstract

There is enough evidence to indicate we may be damaging non-human species at ecosystem and biosphere levels across all taxa from rising background levels of anthropogenic non-ionizing electromagnetic fields (EMF) from 0 Hz to 300 GHz. The focus of this Perspective paper is on the unique physiology of non-human species, their extraordinary sensitivity to both natural and anthropogenic EMF, and the likelihood that artificial EMF in the static, extremely low frequency (ELF) and radiofrequency (RF) ranges of the non-ionizing electromagnetic spectrum are capable at very low intensities of adversely affecting both fauna and flora in all species studied. Any existing exposure standards are for humans only; wildlife is unprotected, including within the safety margins of existing guidelines, which are inappropriate for trans-species sensitivities and different non-human physiology. Mechanistic, genotoxic, and potential ecosystem effects are discussed.

Keywords: DNA; cryptochromes; electro/magnetoreception; non-ionizing electromagnetic fields; radiofrequency radiation; static/extremely-low frequency electromagnetic fields; wildlife.

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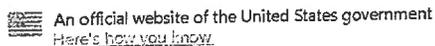
LinkOut - more resources

Full Text Sources

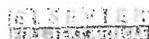
Europe PubMed Central

Frontiers Media SA

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FULL TEXT LINKS



Review Environ Res. 2022 Nov;214(Pt 2):113851. doi: 10.1016/j.envres.2022.113851.

Epub 2022 Jul 14.

Evidence for a health risk by RF on humans living around mobile phone base stations: From radiofrequency sickness to cancer

A Balmori ¹

Affiliations

PMID: 35843283 DOI: 10.1016/j.envres.2022.113851

Abstract

The objective of this work was to perform a complete review of the existing scientific literature to update the knowledge on the effects of base station antennas on humans. Studies performed in real urban conditions, with mobile phone base stations situated close to apartments, were selected. Overall results of this review show three types of effects by base station antennas on the health of people: radiofrequency sickness (RS), cancer (C) and changes in biochemical parameters (CBP). Considering all the studies reviewed globally (n = 38), 73.6% (28/38) showed effects: 73.9% (17/23) for radiofrequency sickness, 76.9% (10/13) for cancer and 75.0% (6/8) for changes in biochemical parameters. Furthermore, studies that did not meet the strict conditions to be included in this review provided important supplementary evidence. The existence of similar effects from studies by different sources (but with RF of similar characteristics), such as radar, radio and television antennas, wireless smart meters and laboratory studies, reinforce the conclusions of this review. Of special importance are the studies performed on animals or trees near base station antennas that cannot be aware of their proximity and to which psychosomatic effects can never be attributed.

Keywords: Base station; Cell tower; Health; Mast; Microwave syndrome; RF radiation; Radar; Radio antennas.

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MedGen

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Ovid Technologies, Inc.



**Minutes
The Township of Cavan Monaghan
Regular Council Meeting**

**Monday, December 4, 2023
1:00 p.m.
Council Chambers**

Those members in attendance were:

Council	Matthew Graham	Mayor
	Ryan Huntley	Deputy Mayor
	Nelson Edgerton	Councillor
	Gerry Byrne	Councillor
	Lance Nachoff	Councillor
Staff	Yvette Hurley	CAO
	Cindy Page	Clerk
	Karlie Cornish-Tkalec	Deputy Clerk/Corporate Services Administrator
	John Connolly	Executive Director of Planning and Development
	Drew Hutchison	Engineering Technician
	Chris Allison	Parks and Facilities Manager
	Brigid Ayotte	Economic Development Communications Officer
	Bill Balfour	Fire Chief

1. Call to Order

Mayor Graham called the meeting to order at 1:01 p.m.

2. Land Acknowledgement

Mayor Graham recited the land acknowledgement.

3. Approval of the Agenda

R-2023-322

Moved by: Byrne

Seconded by: Huntley

That the agenda for the Regular Council meeting be approved as amended to change the title of Item 14.3 to reflect the by-law attached being By-law No. 2023-81 being a by-law authorizing the temporary borrowing of funds to offset

the current expenditures of the Township of Cavan Monaghan.

Carried

4. Disclosure of Pecuniary Interest and the General Nature Thereof

There were no pecuniary interests noted.

5. Closed Session

There was no Closed Session.

6. Presentations

6.1 Donna Popovic, Senior Advisor, Municipal Stakeholder Engagement and Patrick McMahon, Technical Manager Regulatory Affairs , Re - Enbridge Gas Inc. Franchise Agreement Renewal – Township of Cavan Monaghan

Mayor Graham called for a recess to address the technical issues with the sound on livestream 1:13 p.m. to 1:32 p.m.

R-2023-323

Moved by: Nachoff

Seconded by: Byrne

That Council receive the presentation from Donna Popovic, Senior Advisor, Municipal Stakeholder Engagement and Patrick McMahon, Technical Manager Regulatory Affairs regarding the Enbridge Gas Inc. Franchise Agreement Renewal with the Township of Cavan Monaghan for information.

Carried

6.2 Mark Majchrowski, Chief Administrative Officer, Kawartha Conservation - Re: 2024 Budget and Memorandum of Understanding

R-2023-324

Moved by: Byrne

Seconded by: Huntley

That Council receive the presentation from Mark Majchrowski, Chief Administrative Officer of the Kawartha Region Conservation Authority regarding the 2024 Budget and Memorandum of Understanding for information.

Carried

7. Delegation

7.1 Daniel D'Ercole Kawartha Downs General Manager, Christian Chan, The Planning Agency Inc. - Re: Kawartha Downs Update

R-2023-325

Moved by: Nachoff

Seconded by: Byrne

That Council receive the delegation from Daniel D'Ercole, Kawartha

Downs General Manager and Christian Chan, The Planning Agency Inc. regarding the Kawartha Downs Update for information.

Carried

Mayor Graham called for a recess 2:39 p.m. to 2:48 p.m.

8. Minutes

8.1 Minutes of the Regular Meeting held November 20, 2023

R-2023-326

Moved by: Byrne

Seconded by: Nachoff

That the minutes of the Regular Council Meeting held November 20, 2023 be approved as presented.

Carried

9. Minutes from Committees and Boards

9.1 Cavan Monaghan Public Library Board Meeting Minutes of October 17, 2023

R-2023-327

Moved by: Huntley

Seconded by: Nachoff

That the minutes of the Cavan Monaghan Public Library Board Meeting of October 17, 2023 be received for information.

Carried

10. Reports

10.1 Report - Public Works 2023-25 Dedication of Parts 1 & 2, 45R-15457 as Part of Public Road Allowance For Carveth Drive

R-2023-328

Moved by: Byrne

Seconded by: Huntley

That Council approve the dedication of Parts 1 & 2, 45R-15457 as part of the public road allowance, Carveth Drive; and

That the Mayor and Clerk be authorized to execute By-law No. 2023-79 being a By-law to dedicate Parts 1 & 2 on Plan 45R-15457 as part of the public road allowance for Carveth Drive.

Carried

10.2 Report - Corporate Services 2023-12 Franchise Agreement Renewal with Enbridge Gas Inc.

R-2023-329

Moved by: Edgerton

Seconded by: Nachoff

That Council approve the form of draft By-law and franchise agreement and authorizes the submission thereof to the Ontario Energy Board for

approval pursuant to the provisions of Section 9 of the Municipal Franchises Act; and

That Council request that the Ontario Energy Board make an Order declaring and directing that the assent of the municipal electors to the draft by-law and franchise agreement pertaining to the Corporation of the Township of Cavan Monaghan is not necessary pursuant to the provisions of Section 9(4) of the Municipal Franchises Act.

Carried

10.3 Report - ECD 2023-52 Community Improvement Plan Grant Program Recipients

R-2023-330

Moved by: Edgerton

Seconded by: Huntley

That Council support providing Iron Equipment \$10,000 from the 2023 Community Improvement Plan (CIP-E); and

That any unspent funds from the program years 2019-2022 and 2023 Millbrook CIP programs be rolled over to the 2024 Capital Program; and

That Council open the 2024 CIP Program to all the CIP areas (i.e., Millbrook, Urban Fringe and Rural Area) and include all available funding streams.

Carried

10.4 Report - CAO Report 2023-06 Kawartha Conservation Cost Apportioning Agreement

R-2023-331

Moved by: Byrne

Seconded by: Huntley

That Council support the Kawartha Conservation Cost Apportioning Agreement for Category 3 – Programs & Services; and

That By-law No. 2023-80 be approved to authorize the Mayor and Clerk to sign the Cost Apportionment Agreement for the Category 3

Service/Programs between the Township of Cavan Monaghan and Kawartha Region Conservation Authority.

Carried

10.5 Council/Committee Verbal Reports

Deputy Mayor Huntley encouraged everyone to attend the BIA's Christmas in the Village from 5:00 p.m. – 9:00 p.m. on December 7th and noted that the BIA's budget was submitted with a proposed levy increase of \$2000.00.

Mayor Graham spoke to the updates from the Library Board Meeting noting that the Seniors Stories Grant maybe expanding to capture more stories, there was an IT review completed by the County of Peterborough

and a plan to come forward and the Marketing Committee has completed branding enhancements to regenerate the appeal.

R-2023-332

Moved by: Nachoff

Seconded by: Edgerton

That Council receive the Council/Committee verbal reports for information.

Carried

11. General Business

There was no General Business.

12. Correspondence for Information

There was no Correspondence for Information.

13. Correspondence for Action

13.1 Resolution from Municipality of Wawa - Bill C-310 Volunteer Firefighting and Search and Rescue Volunteer Tax Credit - Mayor Graham

R-2023-333

Moved by: Edgerton

Seconded by: Huntley

That Council for the Township of Cavan Monaghan support the resolution from The Corporation of the Municipality of Wawa regarding Bill C-310 Volunteer Firefighting and Search and Rescue Volunteer Tax Credit and direct staff to complete the on-line petition of support and to send a copy to MP, Jamie Schmale.

Carried

14. By-laws

14.1 By-law No. 2023-79 being a by-law to dedicate as part of public road allowance a portion of Carveth Drive described as Part of Lot 10 in Concession 4, Geographic Township of Cavan being Part 2, Plan 45R-15457

14.2 By-law No. 2023-80 being a by-law to authorize the execution of the Cost Apportionment Agreement for the Category 3 Service/Programs between the Township of Cavan Monaghan and Kawartha Region Conservation Authority

14.3 By-law No. 2023-81 being a by-law to provide for the levy and collection of 2023 interim realty taxes and penalties for non-payment thereof * Amended to reflect the By-law title By-law No. 2023-81 being a by-law authorizing the temporary borrowing of funds to offset the current expenditures of the Township of Cavan Monaghan.

14.4 By-law No. 2023-82 to provide for the levy and collection of 2024 interim realty taxes and penalties for non-payment thereof

R-2023-334

Moved by: Byrne

Seconded by: Edgerton

That By-law No. 2023-79 being a by-law to dedicate as part of public road allowance a portion of Carveth Drive described as Part of Lot 10 in Concession 4, Geographic Township of Cavan being Part 2, Plan 45R-15457 and By-law No. 2023-80 being a by-law to authorize the execution of the Cost Apportionment Agreement for the Category 3 Service/Programs between the Township of Cavan Monaghan and Kawartha Region Conservation Authority and By-law No. 2023-81 being a by-law authorizing the temporary borrowing of funds to offset the current expenditures of the Township of Cavan Monaghan and By-law No. 2023-82 to provide for the levy and collection of 2024 interim realty taxes and penalties for non-payment thereof be read a first, second and third time and passed this 4th day of December signed by the Mayor and Clerk and Corporate Seal attached; and

That the draft By-law being a by-law to authorize a Franchise Agreement between the Corporation of the Township of Cavan Monaghan and Enbridge Gas Inc. be read a first and second time this 4th day of December signed by the Mayor and Clerk.

Carried

15. Unfinished Business

There was no Unfinished business.

16. Notice of Motion

There were no Notices of motion.

17. Confirming By-law

17.1 By-law No. 2023-83 being a by-law to confirm the proceedings of the meeting held December 4, 2023

R-2023-335

Moved by: Huntley

Seconded by: Nachoff

That By-law No. 2023-83 being a by-law to confirm the proceedings of the meeting held December 4, 2023 be read a first, second and third time and passed this 4th day of December signed by the Mayor and Clerk and the Corporate Seal attached.

Carried

18. Adjournment

R-2023-336

Moved by: Nachoff

Seconded by: Huntley

That the Regular Council Meeting of the Township of Cavan Monaghan adjourn at 3:02 p.m.

Carried

Matthew Graham
Mayor

Cindy Page
Clerk



**Minutes
The Township of Cavan Monaghan
Special Council Meeting**

**Thursday, December 7, 2023
9:00 a.m.
Council Chambers**

Those members in attendance were:

Council	Matthew Graham	Mayor
	Ryan Huntley	Deputy Mayor
	Nelson Edgerton	Councillor
	Gerry Byrne	Councillor
	Lance Nachoff	Councillor
Staff	Yvette Hurley	CAO
	Cindy Page	Clerk
	Karlie Cornish-Tkalec	Deputy Clerk/Corporate Services Administrator
	Karen Ellis	Director of Planning
	Chris Allison	Manager of Parks and Facilities
	Wayne Hancock	Director of Public Works
	Kyle Phillips	Chief Building Official/By-law Enforcement
	Megan Lytle	Finance Clerk
	Bill Balfour	Fire Chief
	John Connolly	Executive Director of Planning and Development

2. Call to Order

Mayor Graham called the meeting to order at 9:01 a.m.

3. Land Acknowledgement

Mayor Graham recited the land acknowledgement.

4. Approval of the Agenda

R-2023-337

Moved by: Byrne

Seconded by: Nachoff

That the agenda for the Special Council meeting be approved as presented.

Carried

5. Disclosure of Pecuniary Interest and the General Nature Thereof

There were no pecuniary interests noted.

6. Closed Session

There was no Closed Session.

7. Presentation

7.1 Cavan Monaghan Public Library Board - Karla Buckborough and Earl McLeod

Earl McLeod was not present.

R-2023-338

Moved by: Huntley

Seconded by: Nachoff

That Council receive the presentation from Karla Buckborough, CEO of Cavan Monaghan Public Libraries for information.

Carried

Mayor Graham called for a recess 10:32 a.m. to 10:46 a.m.

8. Reports

8.1 Report - Finance 2023-12 1st Draft 2024 Budget Presentation (KP)

Kimberley Pope, Director of Finance/Treasurer had an unforeseen urgent absence therefore, Mayor Graham and Yvette Hurley, CAO provided Council with an overview of the Budget presented and of the Operating and Capital Budgets. The first draft of the 2023 Operating and Capital Budgets is for review, discussion and education purposes between management and Council. This budget does not include any changes to service levels that the municipality currently provides.

R-2023-339

Moved by: Edgerton

Seconded by: Nachoff

That the allocated \$10,000 for the Bell Restoration Project (MRHAC) under Capital requests from Planning, Building & ECD be removed from the 2024 Budget.

Carried

R-2023-340

Moved by: Graham

Seconded by: Byrne

That the allocated \$3,000 for the Porch Light Project (MRHAC) under Capital requests from Planning, Building & ECD be removed from the 2024 Budget.

Carried

R-2023-341
Moved by: Huntley
Seconded by: Nachoff
That Council receive the 1st Draft 2024 Budget for discussion and education purposes; and
That Council direct Staff to come back with a revised 2024 Budget with opportunities to reduce the levy increase to below 4%.

Carried

9. General Business

There was no General Business

10. Confirming By-law

10.1 By-law No. 2023-84 being a by-law to confirm the proceedings of the special meeting held December 7, 2023

R-2023-342
Moved by: Edgerton
Seconded by: Nachoff
That By-law No. 2023-84 being a by-law to confirm the proceedings of special council meeting held on December 7, 2023 be read a first, second and third time and passed this 7th day of December signed by the Mayor and Clerk and the Corporate Seal attached.

Carried

11. Adjournment

R-2023-343
Moved by: Huntley
Seconded by: Edgerton
That the Special Council Meeting of the Township of Cavan Monaghan adjourn at 11:50 a.m.

Carried

Matthew Graham
Mayor

Cindy Page
Clerk



Minutes
The Township of Cavan Monaghan
Millbrook Valley Trails Advisory Committee
Monday, June 26, 2023
4:00 p.m.

Those members in attendance:

Robert Jackson Chair
Maureen McDonald Vice Chair
David D'Agostino
John Fallis
Kirk Hillsley
Meredith Carter, ORCA
Lance Nachoff

Those members absent:

Gary Wall (with regrets)

Those members in attendance:

Karlie Cornish-Tkalec Deputy Clerk/Corporate Services Administrator
Yvette Hurley C.A.O.

1. Call to Order

Mr. Robert Jackson, Chair called the meeting to order at 4:07 p.m.

2. Approval of the Agenda

Moved by: Fallis

Seconded by: Nachoff

That the agenda for the Millbrook Valley Trails Advisory Committee meeting held June 26, 2023 be approved as presented

Carried

3. Disclosure of Pecuniary Interest and the General Nature Thereof

There were no pecuniary interests noted.

4. Closed Session

There was no closed session.

5. Delegations

5.1 Ganny Enduro 2023 - Alex Schmidt

Moved by: Nachoff

Seconded by: D'Agostino

That the Millbrook Valley Trails Advisory Committee support the 2023 Ganny Enduro race on October 1, 2023.

Carried

6. Minutes

Deferred Minutes of the meetings held April 24, 2023 and May 15, 2023

7. Reports

7.1 Financial Report - Yvette Hurley

Moved by: Fallis

Seconded by: Nachoff

That the Millbrook Valley Trails Advisory Committee receive the Financial Report for information.

Carried

7.2 ORCA Update - Meredith Carter

Moved by: Hillsley

Seconded by: McDonald

That the Millbrook Valley Trails Advisory Committee receive the ORCA Update for information.

Carried

7.3 Trail Report - Nachoff/McDonald

Moved by: Fallis

Seconded by: Nachoff

That the Millbrook Valley Trails Advisory Committee received the Trail Report for information.

Carried

8. General Business

8.1 Floating Bridge and Boardwalk Update

Staff will investigate options and report back to the Committee.

8.2 Medds Bridge Reconstruction

Staff will investigate options and report back to the Committee.

8.3 Downtown Trail Expansion

David D'Agostino and Chris Allison are determining property ownership and exploring options.

8.4 Tree removal and replacement around dam and pond

Township staff removed two trees and are working on removing the third tree and replacement options.

8.5 Hope Mill

Moved by: Nachoff

Seconded by: Hillsley

That the Millbrook Valley Trails Advisory Committee approve an upset limit of \$3,200.00 to purchase boards from Hope Mill.

Carried

8.6 Annual Invasive Species Spraying

Moved by: Fallis

Seconded by: Nachoff

That the Millbrook Valley Trails Advisory Committee approve an upset limit of \$1,500.00 for Annual Invasive Species Spraying.

Carried

8.7 2023 Workplan

The Committee discussed the 2023 Workplan.

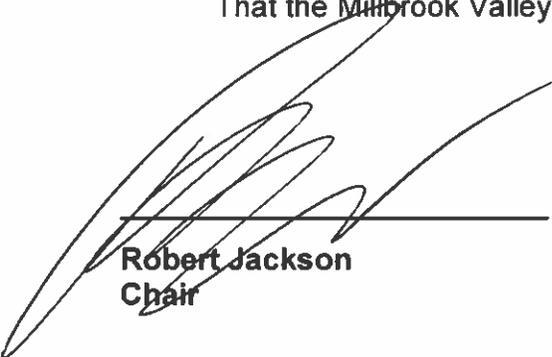
9. Adjournment

Moved by: D'Agostino

Seconded by: Fallis

That the Millbrook Valley Trails Advisory Committee adjourn at 6:09 p.m.

Carried



Robert Jackson
Chair



Karlie Cornish-Tkalec
Deputy Clerk



Minutes
The Township of Cavan Monaghan
Millbrook Valley Trails Advisory Committee
September 25, 2023
4:00 p.m.

Those members in attendance:

Robert Jackson Chair
Maureen McDonald Vice Chair
John Fallis
Meredith Carter, ORCA
Lance Nachoff

Those members absent:

Gary Wall (with regrets)
David D'Agostino (with regrets)
Kirk Hillsley (with regrets)

Those members in attendance:

Chris Allison Parks and Facilities Manager
Yvette Hurley C.A.O.
Karlie Cornish-Tkalec Deputy Clerk/Corporate Services Administrator

1. Call to Order

Mr. Robert Jackson, Chair called the meeting to order at 4:10 p.m.

2. Land Acknowledgement

Mr. Robert Jackson recited the land acknowledgement.

3. Approval of the Agenda

Moved by: Fallis

Seconded by: Nachoff

That the agenda for the Millbrook Valley Trails Advisory Committee meeting held September 25, 2023 be approved as presented

Carried

4. Disclosure of Pecuniary Interest and the General Nature Thereof

There were no pecuniary interests noted.

5. Closed Session

There was no closed session.

6. Minutes

6.1 Minutes of the meeting held June 26, 2023

Moved by: Nachoff

Seconded by: Fallis

That the minutes of the meeting held June 26, 2023 be approved as presented

Carried

7. Reports

7.1 Financial Report

Chris Allison provided a financial report update that to date the Committee has spent \$1,526.40 in Contracted Services and \$4,612.27 in Materials and Supplies.

Moved by: Fallis

Seconded by: Nachoff

That the Millbrook Valley Trails Advisory Committee receive the Financial Report for information.

Carried

7.2 ORCA Update

Meredith Carter provided information that Otonabee Region Conservation Authority is developing a new website and will be switched over towards the end of November or early December. ORCA is in the middle of delivering their education programs and were able to complete upgrades to various conservation areas over the summer. They are currently in the public consultation phase for the amendments to the Source Water Protection Plan.

Moved by: Nachoff

Seconded by: Fallis

That the Millbrook Valley Trails Advisory Committee receive the ORCA Update for information.

Carried

7.3 Trail Report

Robert Jackson provided an update on the trail status for the trails North of Fourth Line.

Moved by: McDonald

Seconded by: Nachoff

That the Millbrook Valley Trails Advisory Committee received the Trail Report for information.

Carried

7.4 Millbrook Valley Trails Boardwalk Repairs

Moved by: Nachoff

Seconded by: Fallis

That the Millbrook Valley Trails Committee hold a special meeting to discuss Millbrook Valley Trails Boardwalk Repairs report.

Carried

8. General Business

8.1 Tree Removal and Replacement Update

Robert Jackson and Chris Allison advised township staff removed two trees and are working on removing the third tree and replacement options.

8.2 Replacement of Cedar Trail Bridge

Robert Jackson provided an update on the condition of the bridge, and has been working with David D'Agostino to widen the access to the bridge.

8.3 Replacement of Lower Medds Bridge

Robert Jackson provided an update that the committee completed repairs to the bridge during workday however advised that this bridge may require further repairs in the future and provided a high level estimate on materials and supplies required.

8.4 CWF Student Volunteers Update

Maureen McDonald provided an update on the Canada Wildlife Federation student volunteers program and the work that they completed on the Millbrook Valley Trails.

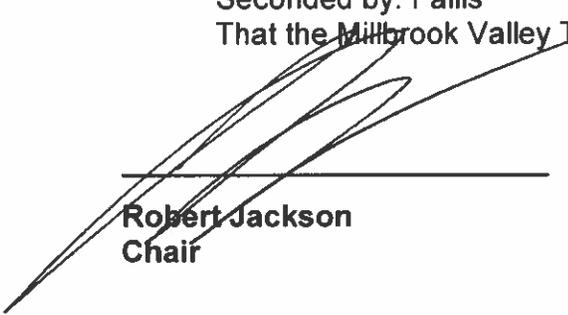
9. Adjournment

Moved by: McDonald

Seconded by: Fallis

That the Millbrook Valley Trails Advisory Committee adjourn at 5:22 p.m.

Carried



Robert Jackson
Chair



Karlie Cornish-Tkalec
Deputy Clerk



Regular Council Meeting

To:	Mayor and Council
Date:	December 18, 2023
From:	Chris Allison, Parks and Facilities Manager
Report Number:	Parks and Facilities 2023-07
Subject:	Vision 2035 - Parks and Recreation Strategic Plan

Recommendation:

That Council receive Vision 2035 - Parks and Recreation Strategic Plan Draft Report.

Introduction:

The purpose of this report is to present the Vision 2035 - Parks and Recreation Strategic Plan before Council. (Attachment No. 1.). This comprehensive Strategic Plan is developed as a guiding tool providing a structured reference to assist Council and staff for park and recreational needs for Council's consideration. The Plan outlines the vision, goals, strategies and a belief statement aimed at enhancing and maintaining our community's parks and recreation facilities in line with the long-term vision for our municipality. Our municipality values the importance of accessible and diverse recreational opportunities for all residents. Over the past 2 years, extensive community consultations, stakeholder engagements, and data analysis have been conducted to develop this forward-looking strategic plan.

Overview:

During the budget meeting of January 20, 2022 Council directed Staff to work with Robert Lockhart of the Rethink Group to consider recreational uses for the remaining Cavan Monaghan Community Centre lands and the long term Parks and Recreation Plan for the future, given that the current Master Plan is dated May 2011.

In March 2022, Robert Lockhart of the Rethink Group began a two-year phasing project to update the 2011 Parks and Recreation Master Plan and consider recreational uses for the remaining Cavan Monaghan Community Centre (CMCC) lands and the Millbrook Arena facility.

Phase One of the Parks and Recreation Plan focused on research, assessment, community engagement analysis, findings and conclusions which resulted in the Parks and Recreational Plan Background Report. It was intended to provide background context, strategic analysis, and conclusions to inform and support Phase Two of the parks and recreation planning process. This report is a living document that will continue to be edited as new information becomes available throughout the process. Peterborough County produced a detailed map of parks and open space to accompany the Background Report and support recommendations for Phase Two. A survey was designed to gather information from households rather than individual residents. Based on the average household size of 2.8 persons, the 319 responses to the survey represented approximately 900 residents. 29 User Group Surveys were sent out with a total of 25 completed. Additional community consultation was included in Phase Two.

Part of Phase One review of the Millbrook Arena was the hiring of Barry Bryan Associates (BBA) to provide an updated review of the Millbrook Arena building condition assessment report dated August 7, 2019 (BBA Project No. 19167) outlining observations and recommendations for the Millbrook Arena located at 4 Needlers Lane Millbrook Ontario and to determine the future of the 72-year-old former Millbrook Arena and property. Currently, the building does not meet accessibility standards of the Province of Ontario for community buildings. The total Construction budget 2022 estimate would be approximately \$4.45M of hard construction cost, and \$5.25M with modest contingencies to maintain it in status quo condition for 25 years.

At the June 5, 2023, Regular Council Meeting, Township Council passed the following motion:

That staff be directed to commence planning for the creation of a community park on the Millbrook Arena lands; and

That the existing users of the Millbrook Arena be permitted to use the existing facility in its current state until the final plans for the community park are approved by Council, or that the facility becomes a health and safety concern; and

That Council's direction be carried forward in Phase Two of the Parks and Recreation Plan – Vision 2035.

The future of the Millbrook Arena and property influenced decisions about how best to provide and locate other culture and recreation facilities in Phase Two.

Phase Two continued with research and assessment, community engagement and analysis which provided recommendations included in the Vision 2035 - Parks and Recreation Strategic Plan which provides direction to assist planning and decision making for recreation, culture and parks. The plan was created to provide quality recreation sport and culture programming and community events to meet growing and

changing needs with vision, foundation, action and flexibility that provides direction to municipal staff and Township Council for the immediate future, out to 2035. Some recommendations look out beyond 2035 to the estimated population of approximately 18,000 that is anticipated by 2051.

Through community engagement, demand research and preliminary site and facility analysis, a broad strategic direction was prepared for the Cavan Monaghan Community Centre (CMCC) and associated undeveloped lands. A general site plan graphic illustration of the initial thinking about the possible configuration of additional outdoor facilities at the CMCC and an approximate footprint for building expansion was created. The proposed Phase Three, 2024 planning and design process will determine the size and orientation of the indoor and outdoor facilities proposed in Vision 2035 - Parks and Recreation Strategic Plan.

After considerable community engagement associated with this plan household survey, user group surveys, community forums and follow-up discussions with user groups on the strategic direction for the future of the Millbrook Arena and associated lands concluded that the preferred option of about 75% of those engaged in the process favored decommissioning the Millbrook Arena and replacing it with a signature downtown park.

Phase Three of the Vision 2035 - Parks and Recreation Strategic Plan not yet approved by Council is identified in the 1st Draft Capital Budget 2024. Phase Three involves initiating a Request for Proposal (RFP) process to secure specialized expertise for the visionary exercise and conceptual design of the downtown park, CMCC and remaining lands which represents a crucial step in revitalization by conducting a visionary exercise and conceptual design we aim to create vibrant, sustainable, and inclusive spaces that align with the aspirations of our community.

Conclusion:

The purpose of Vision - 2035 Parks and Recreation Strategic Plan is to update the outdated 2011 Parks and Recreation Master Plan and provide a strategic plan to help guide Council and Staffs annual for future budget considerations. Strategic directions are outlined throughout the plan to provide an increasingly collaborative and integrated recreation, culture, parks and open space, programming and community events system. The plan will help broaden and strengthen the municipal parks and recreation service, rejuvenate existing municipal parks and help guide the design and development of future parks and to provide quality recreation and cultural facilities to meet growing and changing needs. The plan is a living document and therefore will be reviewed and or amended as Council directs given the future needs of the community.

Financial Impact:

The funds for Phase One and Phase Two of this project were identified in the 2022 and 2023 Capital Budgets. Phase Three is identified in the proposed 2024 1st Draft Capital

Budget for Councils approval. The implementation of this plan will require financial resources, including funding allocations, partnerships, and potential grant opportunities.

Attachments:

1. Vision 2035 – Parks and Recreation Strategic Plan Draft Report

Respectfully Submitted by,

Reviewed by,

Chris Allison
Parks and Facilities Manager

Yvette Hurley
Chief Administrative Officer

Draft Report

Vision 2035 - Parks and Recreation Strategic Plan

Township of Cavan Monaghan

Prepared by:

The Rethink Group

Leisure Services Planning and Management

In Association with

B & A Landscape Architects and Lett Architects

December 2023



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December 18, 2023

Mayor Graham and Members of Council
Township of Cavan Monaghan
988 County Road 10
Millbrook, ON L0A 1G0

Mayor Graham and Members of Council:

The Rethink Group and our associates are pleased to submit **Vision 2035, Parks and Recreation Strategic Plan** for the Township of Cavan Monaghan, an initiative that represents almost two years of work involving our consulting team, the municipal staff team, and valuable input from Township Council; service providers; sport, recreation and arts groups; other stakeholders and hundreds of interested residents.

Vision 2035 provides direction to assist planning and decision making for recreation, culture and parks. Although the time horizon of the Plan is twelve years (2035), the long-term vision looks out to around 2050. The Plan is founded on that Vision; the Belief Statement about the value of investing in parks, recreation and culture; twelve Guiding Principles; and Planning and Provision Guidelines for parks and facilities. The Plan analyzed the characteristics and changing nature of the community, how recreation and culture services are provided, the parks and open space system, recreation and culture facilities, programming and community events, and leisure trends. It also incorporated the findings and recommendations of numerous plans and studies. Vision 2035 builds on current strengths and future opportunities. The Plan addresses challenges and needs with broad strategies and specific recommendations.

We want to acknowledge the guidance and input provided by the municipal staff team, and the contributions of the groups and individuals who worked with our planning team to help shape Vision 2035.

Respectfully submitted,
The RETHINK GROUP,
Leisure Services Planning and Management

Robert Lockhart

Robert Lockhart, Partner

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Executive Summary

Introduction

Vision 2035 is a twelve-year strategic plan to guide planning and decision-making for parks, recreation and culture for the Township of Cavan Monaghan.

The Plan has examined the nature of the community and anticipated population growth and change, the parks and open space system, recreation and culture facilities, programming and community events, how services are provided, and national trends in leisure and service provision.

From that analysis, implications for current and future demand for recreation and culture services were identified. Input from stakeholders and the community further defined leisure demand. System-wide strengths and opportunities were noted, along with current and anticipated challenges and needs.

Refer to the **Background Report** for the planning context, and the assessment of service delivery, facilities, parks and open space, and programming. Key information from that report are included in **Chapter Two** of this document.

Community and stakeholder consultation was comprehensive and included the general public, community leaders, key advisory committees, user groups, representatives of the arts and culture community, and municipal Council. Community engagement techniques included a household survey (representing about 900 residents), surveys to user and

community groups, focus groups, three Community Forums, interviews, and unsolicited submissions.

The strategic plan comprises the following five elements:

- **Belief Statement** - about the value to the community of parks, recreation and culture
- **Guiding Principles** - to provide the guiding philosophy and policy direction
- **Twenty-Five Year Vision** ... the Big Picture Look Ahead
- **Strategic Action Plan** (Strategic Directions, Objectives and Actions)
- **Supplemental Recommendations**

Shifts in Priority

The long-term vision (to 2050) recommends that increased priority be placed on:

- Increased accessibility to and inclusiveness of recreation, sport and culture opportunities throughout the township;
- Enhanced marketing of recreation, sport and culture opportunities;
- A high level of cooperation, collaboration, partnerships and strategic alliances among major providers in the planning, provision and operation of recreation, sport, culture and parks/open space;
- Increased community development and support for and fostering of volunteering and volunteer-based groups;
- Continued to clustering higher level indoor and outdoor recreation, sport and culture facilities – and the need for one or more active recreation/sport parks or other suitable

properties (e.g., education land, provincial recreation lands, and 'recreation areas' associated with conservation authorities);

- Improved trails and cycling network - and the linear park and open space system required to support much of this infrastructure and related activities;
- Provision of fitness/wellness programming and facilities for all ages and abilities;
- Provision of arts and culture programming, events and facilities (public, non-profit and commercial);
- Increased programming, events and facilities to support children, adults and older adults;
- Rejuvenation of existing parks;
- Quality new parks and associated facilities and features;
- Protection and enhancement of natural heritage resources;
- Increased sport-, culture- and trail-based tourism.

Refer to **Chapter Four** for the full text of the 25-year vision.

The Belief Statement

The Belief Statement speaks to “**the value to the community of parks, recreation and culture**”.

We believe that an investment in parks, recreation and culture in the Township of Cavan Monaghan is an investment in:

- the attractiveness and appeal of our community,
- the betterment of our citizens and our community,
- the growth of the economy,
- the protection of the environment, and
- the contribution to climate change mitigation (an increasing and essential benefit).

The Guiding Principles

Twelve Guiding Principles were developed for Vision 2035. They are intended to provide guiding philosophy and policy direction for planning, service provision and decision-making for municipal parks - as well as culture and recreation programming, facilities and related services in the Township of Cavan Monaghan. They are listed below in title only. Please refer to **Chapter Three** for the full text.

- Principle 1: **Ensure Financial Sustainability of Facilities, Programming, and Parks and Open Space.**
- Principle 2: **Maintain a Community Development Approach and Support Volunteering.**
- Principle 3: **Support an Active, Healthy and Engaged Community.**
- Principle 4: **Provide Accessible, Inclusive and Affordable Opportunities.**
- Principle 5: **Enhance Connectedness throughout the Community.**
- Principle 6: **Complement Rather than Compete.**
- Principle 7: **Continue to be Collaborative and Increasingly Integrated.**
- Principle 8: **Optimize Facility Use.**
- Principle 9: **Cluster High Level Outdoor and Indoor Facilities.**
- Principle 10: **Locate for Visibility, Prominence and Access.**
- Principle 11: **Be Environmentally Responsible.**
- Principle 12: **Support Alignment and Hierarchy of Plans and Strategies.**

The Strategic Action Plan

The Strategic Action Plan component of the Strategic Plan provides the detail. It is structured around four themes or Strategic Directions. Objectives and Actions support each Strategic Direction. For each Action, lead and support responsibilities are identified, along with recommended timing (2024-2030, 2031-2035 and the target population of 18,000). For the Executive Summary, only the Strategic Directions and Objectives are listed. See **Chapter Five** for the complete Strategic Action Plan.

Strategic Direction One: Provide an Increasingly Collaborative and Integrated Recreation and Culture Delivery System.

Objective 1:1	As the Township Grows and Evolves, Continue to Broaden and Strengthen the Municipal Parks and Recreation Service. (e.g., maintenance and development of parks/facilities, volunteer development, promotion, programming and special events, research and planning, Parks, Recreation and Culture Committee of Council)
Objective 1:2	Continue to Increase the Level of Collaboration with Other Service Providers within the Township and Throughout the Region. (e.g., continue to interact with other public agencies and other groups who can assist with provision of leisure services within the Township and beyond)
Objective 1:3	Gradually Increase the Level, Comprehensiveness and Quality of Marketing of Leisure Resources, Programming and Events. (e.g., introduction of a Leisure Services Guide)

Strategic Direction Two: Provide an Increasingly Enhanced and Well-Connected Parks and Open Space System.

Objective 2:1	Establish the following Hierarchy of Municipal Parkland and Public Open Space. <ol style="list-style-type: none"> 1. Community Parks 2. Neighbourhood Parks 3. Natural Heritage Open Space
Objective 2:2	Work Toward Alleviating the Deficiency of Neighbourhood Parkland in the Millbrook Settlement Area and the Hamlets. <ul style="list-style-type: none"> ▪ Ten properties have been identified for new Neighbourhood parks (eight via new/recent residential development in Millbrook and the hamlets, and two other properties within the built-up area of Millbrook). ▪ With some enhancements, four Community parks can also serve as Neighbourhood parks. ▪ Two elementary schools in Millbrook can be enhanced to provide park-like functions (one existing and one future).
Objective 2:3	Acquire, Protect and Enhance Natural Heritage Open Space (existing and future public lands).

Objective 2.4	Acquire a Large Park for Sports/Active Recreation and/or Participate in the Provision of Shared Regional Facilities.
Objective 2.5	Systematically Rejuvenate Existing Municipal Parks (beginning with the CMCC, the site of the Millbrook Arena, Old Millbrook School Park and Maple Leaf Park).
Objective 2.6	Design and Develop New Municipal Parks (based on the planning guidelines in Vision 2035).
Objective 2.7	Design and Engineer Stormwater Management Properties as Community Amenities.
Objective 2.8	Dispose of Unsuitable/Surplus Parkland and Reinvest the Proceeds into Existing and New Parks.
Objective 2.9	Park and Open Space Policies

Strategic Direction Three: Provide Quality Recreation and Culture Facilities to Meet Growing and Changing Needs.	
Objective 3.1	Explore the Potential for Regional Culture and Recreation Facilities.
Objective 3.2	Provide and Maintain Ball Diamonds to Meet the Recommended Provision Guideline. <ul style="list-style-type: none"> ▪ Provide two Level A and two level B softball diamonds at the proposed Cavan Monaghan sports park or at one of the potential regional sports parks to meet the target population of 18,000. ▪ Remove the diamonds in Maple Leaf Park. ▪ Refurbish the two Level C diamonds at elementary schools and/or provide one at the new elementary school.
Objective 3.3	Provide and Maintain Rectangular Fields to Meet the Recommended Provision Guideline. <ul style="list-style-type: none"> ▪ Provide an additional Level A field in Maple Leaf Park (when the ball diamonds are removed). ▪ In partnership with KPRDSB, refurbish and maintain the two Level C fields at elementary schools. ▪ In partnership with one of the school boards, provide a Level C field at the new elementary school. ▪ In partnership with KPRDSB, the City of Peterborough and others, upgrade the Level A field at Crestwood SS and provide 3-4 Level B and 2-3 Level C fields at the school board property north of James Strath ES.
Objective 3.4	Provide and Maintain Outdoor Tennis Courts to Meet the Recommended Provision Guideline. <ul style="list-style-type: none"> ▪ The KPRD school board and the City of Peterborough plan to refurbish the two lit courts at Crestwood SS. ▪ Provide two lit courts at the CMCC (in phases).
Objective 3.5	Provide and Maintain Pickleball Courts to Meet the Recommended Provision Guideline. <ul style="list-style-type: none"> ▪ Provide up to eight outdoor courts at the CMCC (in phases). ▪ Provide indoor winter courts in the proposed gymnasium at the CMCC, and summer indoor courts in the arena.
Objective 3.6	Provide and Maintain Outdoor Basketball/Multi-Sport Courts to Meet the Recommended Provision Guideline. <ul style="list-style-type: none"> ▪ As the population grows to the target of 18,000, provide three more basketball/multi-sport courts. ▪ One court should be located at the CMCC. ▪ Other candidate sites are identified.

Objective 3.7	Provide and Maintain Beach Volleyball Courts to Meet the Recommended Provision Guideline. <ul style="list-style-type: none"> Support the proposal to locate four courts at Crestwood SS. Provide four courts at the CMCC (in phases).
Objective 3.8	Provide and Maintain Outdoor Fitness Gyms to Meet the Recommended Provision Guideline. <ul style="list-style-type: none"> Locate one additional outdoor fitness gym at Old Millbrook School Park.
Objective 3.9	Provide and Maintain Picnic Pavilions to Meet the Recommended Provision Guideline. <ul style="list-style-type: none"> Provide additional picnic pavilions and shade structures. Candidate locations include: Old Millbrook School Park, the CMCC, Maple Leaf Park, the proposed downtown park, Peace Park, and Edgewood Park.
Objective 3.10	Provide and Maintain Children’s Playgrounds to Meet the Recommended Provision Guideline. <ul style="list-style-type: none"> Complete the upgrade of surface material at existing playgrounds. Provide a playground in each new Neighbourhood Park that is sufficiently large. As existing parks are rejuvenated and new parks are developed, provide 2 metre walkways to access playgrounds (and all facilities within each park).
Objective 3.11	Provide and Maintain Recreation Trails to Meet Growing and Changing Requirements. <ul style="list-style-type: none"> Continue to expand the trail network utilizing new parkland and other open spaces. Continue to upgrade existing trails to improve accessibility and safety. Consider constructing a section of fully accessible trail. Support on-road cycling via sufficiently wide paved shoulders on roads that are ideal for cycling. Continue to implement the recommendations contained in the 2010 Cavan Monaghan Trail Master Plan.
Objective 3.12	Provide and Maintain Waterplay Facilities to Meet the Recommended Provision Guideline. <ul style="list-style-type: none"> As the population increases toward the target of 18,000, provide two waterplay facilities (CMCC and Maple Leaf Park or Old Millbrook School Park).
Objective 3.13	Provide and Maintain a Skateboard Facility. <ul style="list-style-type: none"> Locate a 4,000 ft² facility at the CMCC – enlarge to 7,000 ft² as the population grows toward 18,000.
Objective 3.14	Provide and Maintain Community, Display and Pollinator Gardens. <ul style="list-style-type: none"> Support existing vegetable, display and pollinator gardens, and provide additional gardens in suitable parks.
Objective 3.15	Provide and Maintain Public Outdoor Performance Venues. <ul style="list-style-type: none"> Consider a suitably sized outdoor venue at the proposed downtown park.
Objective 3.16	Maintain the Public Boat Launch Facility. <ul style="list-style-type: none"> Continue to maintain and possible improve the boat launch facility at Whitfield Landing Park.
Objective 3.17	Provide and Maintain Public Arenas to Meet the Recommended Provision Guideline. <ul style="list-style-type: none"> As the population approaches the target of 18,000, provide another ice surface at either the proposed sports park or as part of a shared regional sports facility.

Objective 3.18	<p>Provide and Maintain a Multi-Sport Field House.</p> <ul style="list-style-type: none"> ▪ If the Township decides that a field house is a facility that should be provided at some time after the Millbrook Arena is decommissioned, there are at least three options to provide such a facility. <ul style="list-style-type: none"> i) provide a Township facility that includes one 100' x 200' pitch, ii) engage in a joint venture investment in a larger shared regional facility, and iii) book time in the proposed gymnasium (CMCC).
Objective 3.19	<p>Provide and Maintain Additional Public Multipurpose/Program Rooms to Meet the Recommended Provision Guideline.</p> <ul style="list-style-type: none"> ▪ Five additional facilities will be required for a population of 18,000. <ul style="list-style-type: none"> i) CMCC ii) Proposed sports park, associated with other indoor facilities at that location
Objective 3.20	<p>Provide and Maintain an Older Adult Social/Recreation/Wellness Space.</p> <ul style="list-style-type: none"> ▪ Principle facility to be located at the CMCC, associated with the proposed expansion.
Objective 3.21	<p>Provide and Maintain a Suitable Venue(s) for the Creative Arts.</p> <ul style="list-style-type: none"> ▪ One option may be in the building at Old Millbrook School Park (possibly as part of an expansion of that facility).
Objective 3.22	<p>Provide and Maintain a Fitness/Wellness Centre.</p> <ul style="list-style-type: none"> ▪ Locate as part of an enlarged CMCC.
Objective 3.23	<p>Maintain the Indoor Walking Track at the CMCC.</p>
Objective 3.24	<p>Provide and Maintain a Gymnasium.</p> <ul style="list-style-type: none"> ▪ Locate as part of an enlarged CMCC.
Objective 3.25	<p>Provide and Maintain a Public Leash-Free Dog Facility.</p> <ul style="list-style-type: none"> ▪ Likely candidate site is Maple Leaf Park.

Strategic Direction Four: Provide Quality Recreation, Sport and Culture Programming and Community Events (including Tournaments).

Objective 4.1	<p>As Demand Warrants, Gradually Increase the Quantity and Diversity of Recreation, Sport and Culture Programming. (e.g., more programming for children, adults, older adults, and arts and culture)</p>
Objective 4.2	<p>As Facilities Improve, Encourage More Sport Tournaments. (e.g., winter and summer – arena, sports fields, trails)</p>
Objective 4.3	<p>As Facilities and Organization of the Arts Improve, Expand Cultural Tourism. (e.g., art in the parks and other art shows, music series, studio tours)</p>

Supplemental Recommendations

Park/Open Space Classification System and Associated Planning Guidelines

The three recommended categories of parkland are proposed, including provision and planning guidelines.

- i) **Community Parks** (larger, community-wide appeal),
- ii) **Neighbourhood Parks** (smaller, close-to-home appeal),
and
- iii) **Natural Heritage Open Space** (ecologically sensitive).

Provision Guidelines for Culture and Recreation Facilities

A provision guideline is recommended for each of the 24 types of culture and recreation facilities included in Vision 2035 – to evaluate the adequacy of current supply and to project requirements to meet the target population of 18,000.

Strategic Direction for the Future of the Millbrook Arena and Associated Lands

The Vision: Create a signature downtown park or civic square that will become a focal point and gathering place for the community. The park will be largely passive in nature and will connect to the downtown commercial area, Old Millbrook School Park and the Public Library, the Millbrook Conservation Area, and the Millbrook Valley Trail network - to create an inspiring open space campus within the centre of Millbrook.

Strategic Direction for the Cavan Monaghan Community Centre and Associated Lands

Candidate Indoor Facility Components to be Considered:

- **Single or double gymnasium** – modified to also be a public assembly space and occasional performance facility. (with improved acoustics, a portable stage, enhanced/specialized lighting and sound, a ‘green room’, and other features to be determined will be required).
- **Fitness/wellness centre** (size and features TBD in Phase Three)
- **Changerooms** to support the proposed gymnasium, the strength and conditioning gym and the aerobics studio.
- **Flexible, multi-purpose spaces** to support culture and recreation activities and meetings (contiguous/dividable – number and size TBD in Phase Three).
- **A dedicated space for older adults** (who will also use the other components at the CMCC).
- **Additional public space** (e.g., washrooms, food services, expanded foyer)
- **Additional office space** (administration, program and maintenance staff).
- **Storage** (to meet existing and new uses).

Proposed Outdoor Facilities and Features (if the eventual building footprint permits):

- a waterplay facility
- 4 pickleball courts with room set aside to expand to 6 and then 8 if demand warrants
- a basketball/multi-sport court
- a tennis court (with room to add another later and light)
- 4 beach volleyball courts (phased 2+2)

- A 4,000 sf² skateboard facility, with room allocated to expand to 7,000 ft² in future
- a gazebo/shade structure/picnic pavilion
- pathways that connect the facilities
- benches located strategically along the pathways, each bench with a shade tree
- parking

Pedestrian Link - It will be essential to provide a lit, hard-surface pedestrian/bicycle link from all of the facilities at the CMCC to the residential community of approximately 2,000 people that is planned for the area directly adjacent to the community centre on the west (Towerhill North).

Strategic Direction for Maple Leaf Park

Recommended facilities to consider:

- additional lit full-size soccer pitch with support facilities
- second playground
- a waterplay facility,
- a picnic pavilion,
- a leash-free dog park, and
- hard-surface pathways to connect all facilities.
- Rejuvenation to be guided by a park concept plan.

Funding and Financing Strategy

Although many of the recommendations in the Strategic Plan will incur capital cost, a good many will not. Some initiatives will incur ongoing operating costs. Nine categories of funding and financing for the recommended capital projects in the Strategic Plan are noted in **Chapter Six, Section 6.7**.

First Steps Toward Implementation

The following are the highest priority activities to initiate implementation of Vision 2035 – Parks and Recreation Strategic Plan. These initiatives focus on the early years of the Plan – and include policies, priority administration/service delivery initiatives, priority park and facility planning and design initiatives, priority park and facility development, and enhanced programming and events. In **Chapter Six, Section 6.8** and the **Strategic Action Plan**, other priority initiatives are identified for the early years of the Plan.

1. **Township Council to Endorse:** the Belief Statement, Guiding Principles, Strategic Priorities (by title), Facility Provision Guidelines, and Park/Open Space Classification System and Associated Planning Guidelines – and **receive the Strategic Plan** in principle to help inform future planning and decision making.
2. Plan and design the proposed **downtown park**.
3. Complete the planning and design of the **Cavan Monaghan Community Centre** and associated lands.
4. Increase the **community development role** of the Municipality in support of established and new groups.
5. Complete the upgrade of **playgrounds** to meet safety standards.
6. Establish a **Committee of Council** to represent culture, recreation and parks.
7. Continue to explore opportunities for **shared regional culture and recreation facilities**.
8. Begin to **develop the remaining lands at the CMCC**, based on the approved plan and the recommended implementation strategy (waterplay facility likely first).

Chapter One: Purpose and Process

1.1 Purpose, Scope and Deliverables

The purpose of this **Vision 2035 - Parks and Recreation Strategic Plan** is to create a plan with vision, foundation, action and flexibility that provides direction to municipal staff and Township Council for the immediate future, as well as to 2035. Some recommendations look out beyond 2035 to the estimated population of approximately 18,000 that is anticipated by 2051 or before.

A strategic plan is different from plans that are referred to as “master plans”. The style of strategic plans allows them to be implemented with more flexibility, and more easily modified and updated as conditions change, and new information becomes available. They are also structured differently.

Vision 2035 contains the following main components:

- A **Background Report** that contains the community profile, planning context, current demand for leisure services, leisure trends, and an assessment of leisure service delivery, the parks and open space system, culture and recreation facilities, and leisure programs. This report is a separate document that informed **Vision 2035**.

Vision 2035 comprises the following components:

- A summary of the **planning context and key finds and conclusions** from the Background Report (Chapter Two)
- A **Belief Statement** about the value of parks, open space and leisure services (Chapter Three).
- **Guiding Principles** (Chapter Three).
- A **Long-Term Vision** of how parks, recreation and culture could evolve over the next twenty to thirty years in Cavan Monaghan (Chapter Four).
- The **Strategic Action Plan** (Strategic Directions, Objectives and Actions) (Chapter Five).
- **Supplemental Recommendations** (Chapter Six).

The Actions associated with each Objective identify who implements each action, who might assist/partner, along with recommended timing.

A map of **Municipal Parks and Other Publicly Available Open Space** was also prepared. It is available in large print format. An inventory of parks and open space can be found in the **Background Report (Appendix C)**.

1.2 Approach

The planning process was divided into two phases and the plan was completed over two years (2022 and 2023). A proposed third phase has been identified to complete the process in 2024.

Phase One included the research and analysis that comprises the Background Report. Although the first draft of this report was completed in 2022, it was continuously updated throughout Phase Two (to December 2023).

The focus of **Phase Two** was the preparation of **Vision 2035 - Parks and Recreation Strategic Plan**. Additional research, analysis and community engagement was completed in 2023, some of which focused on gathering input on various options regarding the future of the Millbrook Arena.

Throughout Phases One and Two, community engagement comprised the following: a comprehensive household survey representing approximately 900 residents; surveys of user groups, other community groups and advisory committees of Council; a focus group workshop with arts and culture interests; interviews with other user groups; submissions from individuals and groups; and three Community Forums.

On June 5, 2023, Township Council agreed that “the existing users of the Millbrook Arena be permitted to use the existing

facility in its current state until the final plans for the community park are approved by Council or that the facility becomes a health and safety concern”.

Phase Three will focus on additional planning and a conceptual design for the downtown park. Phase Three will also advance the emerging plan for the potential expansion of the Cavan Monaghan Community Centre and provide a conceptual site plan for the building and the remaining lands associated with the CMCC. The design process for both properties will be informed by focused additional research and a comprehensive community and stakeholder engagement program. An estimate of capital cost for both projects will be provided.

1.3 Report Structure

The structure and flow of this report is as follows:

Chapter One:	Purpose and Process
Chapter Two:	Planning Context, and Key Findings and Conclusions
Chapter Three:	The Belief Statement and Guiding Principles
Chapter Four:	Vision 2035:
Chapter Five:	The Strategic Action Plan
Chapter Six:	Supplemental Recommendations
Appendix A:	National and Provincial Policy Directions

Chapter Two: Planning Context, and Key Findings and Conclusions

2.1 Introduction

Included in this chapter is an overview of key characteristics of the community; future plans for the community; current and future demand for leisure; and an overview of the attributes, challenges and opportunities associated with the parks and recreation system within the Township.

Refer to the **Background Report** for much more detail on these subjects.

2.2 Regional Context

The Township of Cavan Monaghan is located in the southwest corner of Peterborough County, and immediately adjacent to the southwestern boundary of the City of Peterborough. Future growth of the township and its economy will be largely driven by its proximity to Peterborough and the Greater Toronto Area (GTA), the Peterborough Airport, and highways 115 and 407, as well as the possible high-frequency commuter train that would link the Peterborough area with the GTA – all of which will increase accessibility to employment in GTA communities.

2.3 Community Profile

The following are key characteristics of the Township population that influences demand for culture and recreation services.

- The 2021 census population of the Township was approximately 10,300, including the estimated 2.5% population undercount.
- Until recently, the Township's population has been growing slowly. However, in recent years, the growth rate has increased to an average of 2.7% per year.
- Although the Township's population is a bit younger than that of Peterborough and the surrounding area and has been getting a bit younger lately due to a higher rate of growth, it is still older than the provincial average.
- Household income is considerably higher than the Ontario average, the City of Peterborough and the Peterborough Census Metropolitan Area (the city, the four surrounding townships and the two first nation communities).
- Educational attainment in the Township is similar to the Ontario average.
- From an ethnicity perspective, there is a strong connection to the United Kingdom and Europe. There is a very small visible minority population in the Township, and there is a strong affiliation with the English language. Over three quarters of the population is third generation, with 92% identifying as non-immigrant, and 98.9% identifying as a Canadian Citizen.

Looking ahead to 2051, it is proposed that:

- The township expects to capture approximately 40% of the population and jobs projected for Peterborough County.
- 94% of new residential development will be allocated to the Millbrook Settlement Area which is expected to be expanded in size, while the remaining 6% of population growth will be allocated to the seven hamlets.

Note that this planned growth continues to be influenced by changes in provincial policy.

The population is projected to increase by an average of 2.37%/year and grow to around 18,000 by 2051 or sooner.

The age profile of the Township is projected to age considerably over the next 30 years, with the age 75+ population expected to triple in size over this time period.

These and other changes in the population and economic conditions will strongly influence future demand for parks, recreation and culture services.

2.4 Demand Assessment

2.4.1 Current Demand

The demand assessment comprised the following:

- Analysis of facility utilization to understand how facilities are used and by whom.
- Application of local and national leisure trends - that will influence future demand.

- The household survey:
 - administered in the summer of 2022.
 - 319 responses @ 2.8 persons per household (representing approx. 900 residents or close to 10% of the population).
- Surveys to user groups and other community groups.
- Interviews and other types of correspondence with groups and organizations that relate to parks and recreation (e.g., Old Millbrook School EarlyON Child and Family Centre, Compass Early Learning and Care, the Public Library, Millbrook Mountain Bike Group, Baxter Creek Watershed Alliance, Cavan Monaghan Community for Common Ground, The Green Hills Arts Council, etc.).
- Correspondence with individuals.
- Survey of relevant Committees of Council (e.g., Sustainability Advisory Committee, Municipal Revitalization and Heritage Committee, Millbrook Valley Trails Advisory Committee, and Millbrook Business Improvement Area Executive Committee).
- Meetings and workshops with some interest groups where more information was required (e.g., arts and culture, and sports groups).
- The first Community Forum (the focus of the first Community Forum was to discuss the future of the Millbrook Arena, as well as to hear more about culture and recreation needs and priorities).
- Two Community Forums were hosted in October 2023 to solicit input on the emerging Plan. The Forums attracted 25 people. Six submissions were received afterward.

2.4.2 Unmet and Growing Demand

The following facility and program needs, and predictions were identified from integrating the research and community engagement associated with the demand assessment and trend analysis.

2.7% of respondents to the household survey reported that all of their household's needs are being met within the township. For 63%, only some of their leisure needs are being met within the Township. For 91%, unavailable programs and facilities were the main reasons for going elsewhere. 90% of respondents would like to see parks and recreation services become a higher priority of the Municipality.

User groups reported about the facilities they use and their use patterns (Township facilities and others that they use), the positives and the challenges, as well as current and future demand. That information has been incorporated into the following overview of program and facility desires and predictions – with more detail available in the Background Report.

Market Gaps

The following age gaps in service delivery were identified, especially through the role of the Municipality:

- children (incl. pre-school),
- adults. and
- older adults.

Top Program and Facility Desires and Predictions

Many leisure interests and types of desired facilities were identified through the research and community engagement program. Leisure trends were also applied. The list below represents the highest priority programs and facilities and are in approximate priority order. Other leisure interests are on this list. **Note that not all needs can be met by the Township.**

- aquatic facilities and programs (e.g., indoor pool, aquatic programming, waterplay facility)
- pre-school and children's facilities and programming, including day camps (a growing need)
- more and better trails
- more nature-oriented parks
- more and better playgrounds
- enhanced farmers market
- outdoor skating rink
- youth recreation centre
- fitness/wellness facilities and programs
- more and better picnic areas/pavilions
- basketball/multipurpose sport courts
- older adult recreation centre and programming (a growing need)
- more and larger rectangular fields/soccer
- gymnasium/gym sports
- creative and performance arts facilities, programming and events
- better baseball/softball diamonds
- racquet sports (tennis, pickleball, gym/court sports - current and growing need)
- more indoor multipurpose program and meeting rooms (a growing need)

2.5 Assessment of the Parks and Recreation System

The assessment includes municipal parks; other public and publicly available open space, and municipal and other publicly available indoor and outdoor facilities; as well as how leisure services are delivered were assessed. The assessment began with creating an inventory of lands and facilities, mapping parks and open space, and researching the key public, non-profit/not-for-profit and commercial providers and how they work together to provide programming, parks and open space, and culture and recreation facilities within the Township.

2.5.1 Positive Attributes

The following are the most positive attributes of the parks and recreation system and services as they currently exist. Future opportunities will be discussed later.

The Cavan Monaghan Community Centre (CMCC) – this new facility has expanded and greatly improved the quality of indoor facility offerings, although supporting a relatively narrow range of activities.

Enhanced leisure services delivery – the ability of the Municipality to deliver leisure services has improved recently with staff additions that are providing enhanced support to volunteers and introduction of limited direct programming to augment what community volunteers and others provide.

The trail system associated with the Millbrook Valley Trails organization is already extensive and will continue to improve and expand within and between some of the new residential communities.

The large amount of natural heritage open space, with much more to be acquired through future subdivisions and development applications.

The large amount of Community-level parkland - although a good deal of it is 'natural heritage' in nature and therefore, not suitable for active recreation and facility development.

The positive trend in the development of new facilities and parkland, with all being high quality (e.g., CMCC, Highlands Park and the outdoor facilities located at the CMCC). They have 'raised the quality bar' for public spaces in the township.

2.5.2 Challenges

The following are the top challenges facing the delivery of parks and recreation services.

As the Township continues to transition from a small-population and largely rural municipality, expectations for quantity, quality and type of facilities, parks and programming will continue to increase, especially within the Millbrook Settlement Area - which is proposed to greatly expand and will become more 'urban' in nature.

There is a significant shortfall of Neighbourhood parkland (quantity, quality and distribution) – especially within the Millbrook Settlement Area and the hamlets.

As is the case in most municipalities, new residential developments are not meeting widely accepted targets/benchmarks for quantity, location and sometimes the configuration of dedicated parkland. Larger Community-scale parks and facilities, and the upgrade of existing parks and facilities must be funded from other sources.

This is partly because of the recently weakened Planning Act requirements for parkland acquisition and the declining degree of leverage that municipalities have to influence parkland dedication and subdivision planning. The ability of the Municipality to acquire sufficient quality neighbourhood parkland through development and redevelopment – and to finance parks and recreation services has been greatly diminished by changes to the Ontario Planning Act as a result of Bill 23.

There are a few policies and planning tools that the Township may want to either strengthen or adopt.

There is already or will soon be a shortage of some types of existing facilities to meet current and future needs (e.g., rectangular fields, indoor multipurpose space, a suitable field house type facility, some adult-scale and older adult facilities).

Some types of facilities that are in high and growing demand are not available in the Township (e.g., aquatic facilities, gymnasium, fitness facility, various types of racquet sport

courts, various adult and older adult facilities, creative and performing arts venues).

Partnerships and shared use agreements should be considered to provide access to some types of facilities that are beyond the ability of the Municipality to provide, at least in the near term.

Except for Highlands, Cedar Valley and the developed portion of the CMCC property, other parks and most facilities would greatly benefit from improvement – to meet today’s accessibility standards and increasing expectations for quality and functionality.

Although there is a good deal of Community-level parkland, not enough of it is table land (the type, size and quality of parkland needed to accommodate current and future community-scale outdoor and indoor sport, recreation and other facilities).

Small population municipalities like Cavan Monaghan face a number of financial challenges, including:

- a lower tax base relative to the population - and less commercial and industrial development;
- the cost to provide services such as roads, protective services, water and wastewater;
- the increasing expectations for municipal services from new residents;
- the expressed desire for types of recreation facilities that only larger communities can afford to provide; and
- the ongoing challenge of identifying funding sources and other resources that will allow Vision 2035 to be realized.

2.5.3 Opportunities

On the positive side, the following opportunities have been identified to address some of the current and future challenges.

There is potential to develop additional partnerships/strategic alliances with other providers around potential new facilities that can be used by Township residents and for municipal programs.

- school boards, and elementary and secondary schools within the municipality (potential for joint venture planning, development and maintenance to provide park-like settings in school yards);
- Discussion has been initiated re: potential interest in regional indoor and outdoor culture and recreation facilities that would be shared by partner municipalities and other interested service providers; and
- the City of Peterborough – projects underway and in the planning stages include a twin pad arena, a competition swimming pool, a second skateboard facility, refurbished tennis courts, a pickleball centre, more disc golf facilities, a pump bike track, additional waterplay facilities, etc.

The potential of the remaining land at the Cavan Monaghan Community Centre.

There are opportunities to augment neighbourhood parkland in built-up and developing neighbourhoods through:

- partnerships with other landowners (e.g., school boards),
- conversion of undeveloped municipal properties into parkland,

- development of recently acquired Neighbourhood parkland, and
- conversion of portions of Community-level parks into Neighbourhood parks.

The Township is fortunate to have considerable natural heritage open resources, some of which are already public lands and other properties that will become public open space within future residential and industrial areas. Those lands will provide the opportunity for additional protected natural heritage lands and corridors – supporting natural systems, trails, outdoor education, nature appreciation and picnic areas.

The potential of the site of the Millbrook Arena, adjacent conservation authority lands and Needlers Lane to be transformed into a high-profile downtown park or public square to complement historic downtown Millbrook, and to provide culture, recreation and heritage resources for residents and visitors.

On June 5, 2023, Township Council passed the following resolution:

- That staff be directed to commence planning for the creation of a community park on the Millbrook Arena lands; and
- That the existing users of the Millbrook Arena be permitted to use the existing facility in its current state until the final plans for the community park are approved by Council, or that the facility becomes a health and safety concern; and
- That Council's direction be carried forward in Phase Two of the Parks and Recreation Plan – Vision 2035.

Chapter Three: Belief Statement and Guiding Principles

3.1 Introduction

Vision 2035 is founded on a fundamental Belief Statement about the value to the community of parks, recreation and culture – as well as twelve principles that are intended to provide guiding philosophy and policy direction for open space planning, leisure services provision, and decision-making for municipal parks, facilities and programming in the Township of Cavan Monaghan.

The Belief Statement and Guiding Principles are based on the evidence-based personal, social, economic and environmental benefits of parks, recreation and culture. They also reflect contemporary planning principles and best practices. They embody key messages from the **Framework for Recreation in Canada 2015** and **Pathways to Wellbeing** which provide a renewed generic definition of ‘recreation’, a ‘wellbeing-based’ vision for recreation in Canada, and goals and priorities to guide planning and decision-making (see below). Note that the renewed definition of recreation is inclusive of ‘social, intellectual, creative and spiritual’ pursuits. The Framework also speaks about the challenges and opportunities facing communities, as well as key benefits of culture, recreation and parks – all of which are applicable to the Township of Cavan Monaghan and surrounding area.

A Renewed Definition of Recreation in Canada (from the “Framework for Recreation in Canada/Pathways to Wellbeing”)

Recreation is the experience that results from freely chosen participation in physical, social, intellectual, creative and spiritual pursuits that enhance individual and community well-being.

A Wellness-based Vision for Recreation in Canada (from the “Framework for Recreation in Canada 2015/ Pathways to Wellbeing”)

“We envision a Canada in which everyone is engaged in meaningful, accessible recreation experiences that foster:

- individual wellbeing,
- community wellbeing, and
- the wellbeing of our natural and built environments.”

The national **Framework** supports the following five **goals and priorities**:

- **Active Living:** Foster active living through physical recreation;
- **Inclusion and Access:** Increase inclusion and access to recreation for populations that face constraints to participation;
- **Connecting People and Nature:** Help people connect to nature through recreation;
- **Supportive Environments:** Ensure the provision of supportive physical and social environments that encourage participation in recreation and build strong, caring communities; and
- **Recreation Capacity:** Ensure the continued growth and sustainability of the recreation field.

The Belief Statement and Guiding Principles that are the foundation of **Vision 2035 – Parks and Recreation Strategic Plan for Cavan Monaghan Township** also embody the 2009 **Charter for Recreation and Parks in Ontario** which, in part, states that “everyone in Ontario has a right to quality, accessible and inclusive recreation and parks services in their communities – services that are essential for the health of Ontarians, the quality of life in our communities, and the sustainability of our environment”.

The Charter further states that “every citizen in Ontario has the right and freedom to:

1. **Participation** – in safe, affordable and quality recreation programs that are in harmony with the diversity of the community.
2. **Active Living** – be physically active through participation in both organized and informal sport and recreation activities.
3. **Access to Nature and the Outdoors** – experience nature and access open spaces within their communities.
4. **Enriching Experiences** – experience the arts, cultural heritage, sport and recreation activities in their communities.
5. **A Welcoming and Inclusive Community** - be included in activities that build strong communities, engaged citizens and a healthy family life.
6. **Engagement** – be engaged in the planning of recreation and parks in their communities and to participate in volunteer activities.”

Recreation and parks can help us to overcome the significant challenges facing our communities today, including the high degree of physical inactivity of residents, the rising cost of health care, a rise in youth violence, protection of the

environment, reduction of greenhouse gas emissions, sequestering carbon, and adapting communities to climate change.

Vision 2035 encompasses a more comprehensive view of leisure services than the Ontario Charter or the national Framework for Recreation.

There are strong parallels between the Ontario Charter and the Framework for Recreation in Canada 2015. Both were developed from a sport, recreation and parks perspective.

Although they speak to it, they do not provide the same weight to arts and culture as is a goal of **Vision 2035**.

The reference to ‘welcoming and inclusive community’ in the Charter for Recreation and Parks in Ontario does not speak directly to welcoming, including and reflecting ethno-cultural communities into culture and recreation activities – as is a goal of **Vision 2035**.

3.2 The Belief Statement

The Belief Statement speaks to “**the value to the community of parks, recreation and culture**”.

We believe that an investment in parks, recreation and culture in the Township of Cavan Monaghan is an investment in:

- the attractiveness and appeal of our community,
- the betterment of our citizens and our community,
- the growth of the economy,
- the protection of the environment, and
- the contribution to Climate change mitigation (an increasing and essential benefit).

The results of this investment will:

- Improve the **personal health and wellbeing for our citizens** – involvement in culture and recreation pursuits and active living lowers health care costs, improves quality of life and increases life expectancy.
- Promote greater **citizen engagement and increased respect for community** - involvement in community organizations and activities results in more civic engagement, increased civic pride, greater respect for the community - and ultimately a safer and more democratic community.
- Develop **proud and confident leaders** - involvement in culture and recreation pursuits builds important social skills and produces leaders that are better able to serve their community.
- Foster **strong neighbourhoods and a vibrant downtown** – investment in parks, recreation and culture is a catalyst for building and sustaining a strong and self-sufficient community, vibrant neighbourhoods, and a vibrant and rejuvenated downtown.
- **Reduce crime and lower costs for policing and justice** - increased opportunities for involvement in recreation, sports and arts reduces self-destructive and anti-social behaviour, alienation and racism.
- Create a **cleaner and healthier environment** – parks, trees and natural areas protect ecological integrity, sequester carbon, improve air quality, help to purify our water and encourage strong stewardship ethics.
- Stimulate **economic growth and prosperity** – investment in parks, recreation, sports and culture helps to create and sustain the economic and social environment necessary for business success – stimulating employment, increasing productivity and increasing our community’s attractiveness to existing and new residents and businesses – as well as tourists.
- **Build strong families** - families that play together, stay together. Involvement in culture and recreation activities supports and strengthens families.
- Improve **personal health and wellbeing - mind, body and spirit** - involvement in recreation, play, connection to

nature, and sports and culture can help children, youth and adults develop their full physical, social, creative, intellectual and spiritual capacity.

- Preserve and celebrate our **cultural heritage and diversity** - helps us to better understand ourselves, our neighbours and newcomers to our community.

3.3 The Guiding Principles

As introduced earlier, the twelve Guiding Principles are intended to provide the guiding philosophy and policy direction for planning, service provision and decision-making for parks and open space, as well as culture and recreation programming, facilities and related services in the Township of Cavan Monaghan.

Principle 1: Ensure Financial Sustainability of Facilities, Programming, and Parks and Open Space.

Ensure that the capital and net operating costs associated with the provision and operation of public facilities are affordable in the short term, and economically sustainable for the future. Ensure that programs, events and related services respond to the growing and changing needs and interests of residents - and are economically sustainable within the resources of our community. Responsible stewardship of public assets and taxpayers' dollars is essential.

Principle 2: Maintain a Community Development Approach and Support Volunteering.

Historically, Cavan Monaghan has been most successful when a community development approach to service delivery has been utilized. Processes and resources must be in place to permit and encourage residents to be involved in determining priorities, developing plans, and implementing culture and recreation opportunities that reflect the needs, interests and desires of citizens. The Municipality should ensure consistent policy, and when feasible, increase human and financial support to community-based organizations that are able to provide culture and recreation programming, and other related services.

The fundamental energy and drive that creates the majority of our culture and recreation opportunities comes from the many volunteers who, as part of their own leisure choices, create and sustain culture and recreation opportunities for the community. Their contribution must be celebrated and supported.

Principle 3: Support an Active, Healthy and Engaged Community.

For our community to be strong, healthy and vibrant, efforts and resources must be focused on engaging citizens both physically and socially. A high quality of life that is supported by opportunities for involvement in recreation, sports and cultural pursuits needs to be in place for all ages and abilities. Emphasis must be placed on creating awareness of the importance of a healthy lifestyle, as well as the availability of culture and recreation opportunities that support physical activity, mental health and social interaction.

Principle 4: Provide Accessible, Inclusive and Affordable Opportunities.

Facilities, events, goods, services, employment, information and transportation will be accessible to people of all abilities.

‘Accessibility’ means:

- equal access to indoor and outdoor facilities and parks.
- programs should support people of all abilities.
- employment opportunities for people with disabilities.
- residents have good options to travel to facilities on foot, and by active transportation and automobile.

The cost for programs, events and facility access must be affordable; and the programs and events need to reflect the diversity of our community.

Principle 5: Enhance Physical Connectedness Throughout the Community.

Enhance physical connectedness throughout the community by working toward extending the recreational trail system and creating a complementary on-road cycling network throughout the Township as roads are repaved - with strong connections to the regional network, as well as other culture and recreation resources. Also work toward connecting as many neighbourhoods as possible into the township-wide and regional trail and cycling network - via a combination of trails, pathways, sidewalks and on-road cycling routes.

Principle 6: Complement Rather than Compete.

Based on the philosophy of minimizing duplication and optimizing investment in services, the Township should complement rather than compete with what other providers can and are offering - and only provide similar facilities, programming and associated services when:

1. there are areas of under-service and/or growing demand that is not being met by others,
2. the quality of other services is substandard,
3. the price of other services is too high for less affluent members of the community – and the Municipality decides to offer a particular program at a more affordable price point,
4. distance to other services is deemed to be too far, and
5. the Municipality decides that it wants to become a principal service provider in a particular area (e.g., recreational skating, indoor roller blading, indoor in-line skating, waterplay facilities, etc.)

Principle 7: Continue to be Collaborative and Increasingly Integrated.

Continue to seek opportunities for the Municipality to collaborate with others to provide parkland; culture and recreation facilities; and associated programming and events - particularly with the school boards, Fleming College, Trent University, the conservation authorities, the Baxter Creek Watershed Alliance, The Green Hills Arts Council, 4th Line Theatre, Peterborough County, neighbouring townships, volunteer-based community groups, and the commercial sector. Continue to seek opportunities to increase the integration of services among the major providers in areas such as: research and planning; information and marketing; volunteer engagement; programming, service and facility provision; and scheduling of facilities, programming and events.

Principle 8: Optimize Facility Use.

Relative to the characteristics and capabilities of each type of facility, ensure that use is optimized before additional facilities are provided. Facilities at the Community-wide level of provision should always be programmed for the highest and best use in prime time. However, for natural turf sports fields, 'optimum' utilization must include a high level of maintenance and periodic rest.

Principle 9: Cluster High Level Outdoor and Indoor Facilities.

To increase efficiency, programmability and opportunities for sport and cultural tourism, encourage the clustering of compatible indoor and outdoor culture and recreation facilities in Community parks and associated open spaces such as secondary schools. Create clusters of high-level lit sports fields, tennis courts, pickleball courts, beach volleyball courts and other types of sport facilities in larger parks that are visible and accessible, and where lighting, parking and other support facilities and features can be provided without negatively impacting adjacent neighbourhoods. Combine compatible indoor facilities into sizable complexes to create 'one-stop shopping' environments that co-locate culture and recreation facilities with libraries, art galleries and municipal administration, where desirable and feasible. Clustering of facilities should continue to be encouraged on lands owned by the Municipality and others in partnerships and strategic alliances.

Principle 10: Locate for Visibility, Prominence and Access.

Strive to locate major sports parks, as well as major culture and recreation complexes in locations that are highly visible and readily accessible to the community via major roads and trails. This will also promote and celebrate these facilities that are valuable community assets and sources of civic pride.

Principle 11: Be Environmentally Responsible.

Operate in a manner that protects the environment and reduces the carbon footprint of culture and recreation facilities.

Essential components of environmental responsibility include:

- environmental commitment and awareness, especially to natural heritage,
- making a commitment to fully embrace environmental sustainability,
- adopting measurement and monitoring practices, and
- ensuring a net positive impact on the environment and society.

It means that a conscientious commitment has been made to strive for ongoing measurement and monitoring to continually reduce negative impacts on the environment by: reducing corporate and community greenhouse gas emissions; reducing waste; reducing energy and water consumption; reducing air and water pollution; generating green energy via public buildings and properties; increasing employee, customer, and public environmental awareness and education; and an ongoing commitment to continuing to reduce environmental impacts into the future.

Principle 12: Support the Alignment and Hierarchy of Plans and Strategies.

Plan alignment and cross-departmental collaboration will ensure that the corporate vision is a driver for building prosperity, enabling partnerships, and recognizing efficiencies as we work toward a shared community vision. The Township of Cavan Monaghan is working on updating existing and adopting a number of important new plans and strategies that will shape how the community will grow and prosper. Some of these plans include the Official Plan and Zoning By-Law, the Climate Action Plan, the Corporate Strategic Plan, the Trails Master Plan, and the Master Fire Plan. Aligning those and other initiatives and plans is important for moving forward with a comprehensive 'big picture' approach to planning and service provision in Cavan Monaghan. There is a hierarchy or 'nesting' of how these plans and strategies align - with the Official Plan and Corporate Strategic Plan being paramount to all other plans and strategies.

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Chapter Four: Long-Term Vision ... the ‘big picture look ahead’ to 2050

Most strategic plans are supported by a vision that describes where the organization or service would like to be at some point in the future. The vision looks out past the shorter-term time horizon of a strategic plan to provide a target to aim for and to provide context for many of the near- and mid-term recommendations. The vision is sometimes referred to as a ‘big picture look ahead’. To provide sufficient flexibility and latitude, the messages and images in a long-term vision need to be general in description and not tied to specific dates. The vision is sometimes written as if we are already in the future and looking back at accomplishments. No one expects that the future will unfold exactly as in the vision, and some things will come about that have not yet been imagined.

The vision has been aligned with the Township’s corporate Mission and Vision Statements.

So, imagine it’s 2050 and we’re looking back on **what’s been accomplished over the past twenty-five years** in the area of parks, recreation and culture in Cavan Monaghan.

Since 2023, the township has grown by about 8,000 residents. Influenced by provincial policies and a desire for more compact communities, residential density has increased. The age profile is much older, with almost twice as many older adults as children and youth. That has greatly impacted culture and recreation services and access to parks and facilities. The community is more ethno-culturally diverse and has attracted and successfully integrated newcomers.

This long-range vision was founded on a Belief Statement and Guiding Principles that were established in 2023 and endorsed by Township Council. The Belief Statement spoke about the value to the community of parks, recreation and culture. The Guiding Principles provided the philosophy and policy direction for planning, service provision and decision-making.

Cavan Monaghan has benefitted from its location directly southwest of the City of Peterborough with direct highway access to the Greater Toronto Area (115 kilometres to downtown Toronto). The township is located in a beautiful part of southern Ontario amongst rolling hills and farmland. The community is in a region that is rich in cultural and natural heritage including the Trent-Severn Waterway, the Oak Ridges Moraine and several First Nation communities. Over the years, Cavan Monaghan has been able to leverage all of those and other advantages.

The township has become well known for its local and regional partnerships and a high degree of service integration. That was influenced by a desire by major service providers to work together to plan for, build, operate and share in the use of major indoor and outdoor culture and recreation facilities.

That culture of co-operation and partnership has extended to marketing, programming, community events, volunteer engagement, staff training and bulk purchasing. This has allowed community resources to be optimized and excellent facilities, programming and services to be realized.

Volunteer-based groups and community organizations continue to be the essential backbone of culture and recreation services in the township. Twenty years ago, a Volunteer Engagement Strategy was prepared to address many of the issues of the day. It was informed by the trends that were transitioning volunteering at that time. Over the years, specific initiatives such as “Volunteer Cavan Monaghan” and increased investment of human and financial resources to nurture and sustain volunteers has substantially grown the capacity and effectiveness of volunteers.

The marketing of culture and recreation services and facilities has become much more comprehensive and much better integrated. A single point of access to information has been established that focuses on types of opportunities and specific market segments, rather than individual providers.

Culture and recreation facilities and services are now more accessible and inclusive. All facilities and parks are accessible for persons with disabilities and by older adults. Culture and recreation opportunities have become more affordable to a greater percentage of the population. Also, programs, events and facilities are much more reflective of and appealing to our growing ethno-cultural communities.

Great strides have been made to improve the quality, appeal and usability of the many parks throughout the Township. Over the first fifteen years of Vision 2035, all of the legacy parks were systematically rejuvenated to make them more appealing, accessible and functional. That redesign and rejuvenation work began with Old Millbrook School and Maple Leaf parks.

With the assistance of interested residents and stakeholders, plans were prepared in 2024 for a signature downtown park to replace the old Millbrook Arena. This civic square has become home to many family-oriented activities and community events, is a key feature of the parks system, and is a great asset to the downtown Millbrook commercial area.

The undeveloped municipal lands to the south of Old Millbrook School Park were added to the park in 2024. Through redesign, the developable portion of the park has been substantially improved, with additional facilities to meet neighbourhood and community-wide needs. The link between the new downtown park and this park and the Public Library was also strengthened.

Most gaps in neighbourhood parkland have been eliminated, in part through the establishment of three new neighbourhood parks in the southern part of Millbrook and new Neighbourhood parks in most of the hamlets.

Connectedness among parks and between parks and other compatible land uses has improved. Where feasible, creeks and their valleys, as well as other natural heritage lands have been incorporated into and protected by the linear parks and open space system. The Millbrook Valley Trail system has greatly increased in length to connect the new residential areas and close most of the gaps that existed twenty-five years ago. Trail quality has been steadily improved, and the trails are more accessible for persons with disabilities and the growing older adult population.

A large active recreation/sports-oriented park was acquired in the early years of the Plan. It is now home to a new ball diamond complex, additional rectangular fields, a facility to support athletes using the park, a signature picnic pavilion and trails. There is room to add more facilities if the community increases in population.

When the new ball facility was completed, the ball diamonds at Maple Leaf Park were replaced with a full-size lit adult-scale soccer pitch. The service building was enlarged to include change rooms, additional washrooms and a food service facility. An additional playground, a waterplay facility and a new picnic pavilion were established to support sports activities, especially tournaments - but also family and group social events.

The Cavan Monaghan Community Centre has become the hub of activity for the growing community. In 2024, a plan was developed to guide the expansion of the community centre and the development of the remaining lands. The expansion added a gymnasium, a fitness centre, an older adult centre and program rooms to complement the ice surface, walking track and original program rooms. Outdoor facilities included pickleball, tennis, beach volleyball and basketball courts, a waterplay facility, a picnic pavilion, a skateboard facility and walking paths.

In response to the desire by the Baby Boom generation and especially the aging Echo generation to be increasingly integrated into mainstream 'adult' programming, less emphasis is now being placed on dedicated older adult programming and facilities. The dedicated older adult centre that was added to the Cavan Monaghan Community Centre was recently converted into general program space to meet the needs of all age groups and interests.

Festivals, themed community events, ethno-cultural celebrations and sport tournaments continue to be encouraged and supported. Twenty years ago, the link between tourism and community culture and recreation began to be better understood and leveraged. As new facilities were built, they were designed and sized to meet the needs of the community, and to support sport-, culture- and trail-based tourism. Emphasis was placed on clustering similar outdoor facilities in high profile parks to better support tournaments and everyday programming.

What has been most rewarding is the way that service providers and the community are working together to determine needs; optimize human, capital and land resources; integrate services; partner to get things done; promote what is available; and share in the results.

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Chapter Five: The Strategic Action Plan

5.1 Introduction

Supported and informed by the Belief Statement, the Guiding Principles and the Long-Term Vision is the fourth element of the Strategic Plan – the **Strategic Action Plan**. It comprises four strategic directions. Each strategic direction is comprised of objectives, and for each objective, there are specific actions.

Vision 2035 comprises the following four **Strategic Directions** which are like goals.

1. **Provide an Increasingly Collaborative and Integrated Recreation and Culture Delivery System.**
2. **Provide an Increasingly Enhanced and Well-Connected Parks and Open Space System.**
3. **Provide Quality Recreation and Culture Facilities to Meet Growing and Changing Needs.**
4. **Provide Quality Recreation, Sport and Culture Programming and Community Events (including Tournaments).**

The **Objectives** identify broad initiatives and policies to support each Strategic Direction.

The **Actions** identify specific initiatives and strategies to implement each Objective, as well as identifying who takes responsibility to implement each action, who assists, and the recommended timeline. Some of the actions are ‘ongoing’ in nature, and therefore extend through all of the time periods.

Timing/Priorities

The Strategic Plan comprises the following three time periods:

- **Short-term** timing represents the first seven years of the Strategic Plan (2024-2030).
- **Medium-term** timing covers the 2031-2035 period.
- **Long-term** timing represents the post-2035 period to a target population of 18,000.

Chapter Six comprises **Supplemental Recommendations** that either support more than one Strategic Direction, are too detailed to include within the Strategic Action Plan structure, or do not fit well into that structure. An example is **Provision Guidelines for Selected Culture and Recreation Facilities** and the **Capital Plan** that are connected to more than one Strategic Direction and are best presented in table format.

It is recommended that Township Council adopt **Vision 2035 – Parks and Recreation Strategic Plan** ‘in principle’ and approve the **Belief Statement** and **Guiding Principles** in order for them to inform policies and priorities.

Many of the recommendations in the **Strategic Action Plan** will inform the 10-year capital forecast and will be brought forward for consideration via the annual budget process.

5.2 Shifts in Priority Reflected in the Long-Term Vision

As noted in **Chapter Four**, the long-term vision looks out to around 2050 and recommends that **increased priority** be placed on the following over the 25 or so years:

- Increased accessibility to and inclusiveness of recreation, sport and culture opportunities throughout the Township;
- Enhanced marketing of recreation, sport and culture opportunities;
- A high level of cooperation, collaboration, partnerships and strategic alliances among major providers in the planning, provision and operation of recreation, sport, culture and parks/open space;
- Increased community development and support for and fostering of volunteering and volunteer-based groups;
- Continued to clustering higher level indoor and outdoor recreation, sport and culture facilities – and the need for one or more active recreation/sport parks or other suitable properties (e.g., education land, provincial recreation lands, and ‘recreation areas’ associated with conservation authorities);
- Improved trails and cycling network - and the linear park and open space system required to support much of this infrastructure and related activities;
- Provision of fitness/wellness programming and facilities for all ages and abilities;
- Provision of arts and culture programming, events and facilities (public, non-profit and commercial);
- Increased programming, events and facilities to support children, adults and older adults;
- Rejuvenation of existing neighbourhood and community parks;

- Quality new parks and associated facilities and features;
- Protection and enhancement of natural heritage resources; and
- Increased sport-, culture- and trail-based tourism.

These shifts in priority are reflected in the **Belief Statement**, the **Guiding Principles** and the **Long-term Vision**, as well as the **Strategic Action Plan** that is presented in this chapter. The objectives and actions associated with the four Strategic Priorities are not listed in priority order. However, a general sense of priority is indicated by the recommended timing for each action and the broad sense of priority implied by the above list of proposed shifting priorities.



Tributary of Baxter Creek South of Brookside Street

5.3 The Strategic Action Plan

The following tables comprise the **Strategic Action Plan**, with each table containing one of the four **Strategic Directions**.

Table Legend

Twp.	Township of Cavan Monaghan
City of Ptbo.	City of Peterborough
KPRSB	Kawartha Pine Ridge District School Board
PVNCCDSB	Peterborough, Victoria, Northumberland and Clarington Catholic District School Board
ORCA	Otonabee Regional Conservation Authority
GRCA	Ganaraska Region Conservation Authority
Public Health	Peterborough Public Health

Assumption that the population of the township could be around 18,000 by or prior to 2051.



Cavan Monaghan Community Centre



Ball diamond in Maple Leaf Park

Strategic Direction One: Provide an Increasingly Collaborative and Integrated Recreation and Culture Delivery System.

Objective 1:1: As the Township Grows and Evolves, Continue to Broaden and Strengthen the Municipal Parks and Recreation Service.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
1.1.1	<p>Over time and as required, expand the areas of responsibility/roles of this department to include:</p> <ol style="list-style-type: none"> 1. Maintenance and development of parks and facilities (existing role – increase staffing as more parks and facilities are added) 2. Volunteer development (engaging community volunteers in the provision of programming and other related services – existing and expanding role) 3. Promotion of leisure services (parks, facilities, programs, events – existing and expanding role) 4. Leisure programming (gradually increase the amount of direct programming organized and offered by the Township existing and expanding role) 5. Special events (tournaments, community celebrations, exhibitions, art and music shows, etc. - existing and expanding role) 6. Research and planning (future parkland in new communities, program research and planning, monitoring facility utilization and program registration, research and planning for facility improvements and additions, etc. - existing and expanding role) 	Twp.	Municipal Council	*	*	*	*

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
1.1.2	Broaden the mandate of the Parks and Recreation Department to better incorporate arts, culture, as well as natural heritage.	Twp.	Municipal Council	*			*
1.1.3	To support an increasing community/volunteer development role, add a 'Volunteer Development Coordinator' (a position requiring a Certificate in Volunteer Management from an accredited college program).	Twp.	Municipal Council	*			*
	Prepare tools and assist with training to assist community groups in the development of governance structures, fiscal management, market research, program promotion, volunteer recruitment and retention, applying for grants, strategic planning, etc.	Twp.		*			*
	Annually host a 'Volunteer Recognition' night to celebrate and acknowledge the contributions that volunteers make to the community.	Twp.	Community groups	*			*
	Collaborate with local schools to encourage students to 'volunteer' in the leisure sector to fulfill the 40 hours of volunteerism required by secondary school students in Ontario.	Twp.	Schools	*			*
	Prepare a Volunteer Engagement Strategy to inform and support this enhanced municipal role.	Twp.	Specialist	*			
1.1.4	As parks and facilities are added and improved, increase the maintenance staff as required within the Parks and Recreation Department.	Twp.	Municipal Council	*			*

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
1.1.5	As the community grows and changes in composition, it may be beneficial to consider a Committee of Council to advise and support staff re: demand assessment, and with planning and decision making for parks, recreation and culture.	Twp.	Township Council	*			*
1.1.6	Continually update the inventory and mapping of parkland and associated public and publicly available open space, as well as culture and recreation facilities.	Twp.	Service providers	*			*
1.1.7	Annually collect data from all program registration, including age, gender and residency (municipal, volunteer groups and commercial entities who rent municipal facilities). Track trends in participation in each leisure activity to assist with program, facility and park planning.	Twp.	User groups Service providers	*			*
1.1.8	To reduce potential overlaps and timing conflicts, and to work toward filling service gaps, continually collaborate with others who provide leisure programming, events and tournaments in the Township re: program planning, and offerings and scheduling. Also, share participation and demand data to build a comprehensive picture about participation trends, and current and predicted future demand across all sectors.	Twp.	Service providers	*			*
1.1.9	To assist with short and medium-term program and facility planning, host a Community Forum (every other year) for culture and recreation user/community/advisory groups; leisure service providers; and interested citizens to discuss service adequacy, participation trends, unmet demand, and future demand indicators.	Twp.	Community and advisory groups Service providers	*			*

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
1.1.10	Promote and facilitate increased participation in leisure programming and facility use by persons with diverse backgrounds and low income by: i) Continuing to implement the Township’s Accessibility Plan and Accessibility Standards for Customer Service. ii) Collaborating with culture, recreation, sport and community groups to find ways to reduce the financial burden to participate in leisure services for low-income residents.	Twp.	Community groups User groups Service providers	*			*
1.1.11	Promote the personal, social, environmental and economic benefits of leisure to the community by: i) Publicizing the key messages via print, the semi-annual Leisure Services Program Guide (see Action 1.3.1), the Township website, social media and other means. ii) Recognize and celebrate Recreation and Parks month in June utilizing tools provided by Parks and Recreation Ontario. iii) Through available means of communication and programming, promote and encourage increased levels of physical activity among citizens.	Twp.	Community groups Service providers	*			*
1.1.12	Continually research grants and other sources of operating and capital funds to support priority initiatives.	Twp.	Community partners				*

Objective 1:2: Continue to Increase the Level of Collaboration with Other Service Providers within the Township and Throughout the Region.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
1.2.2	Continue to interact and collaborate with other public entities within the township and beyond. Examples include the Public Library, the KPRD School Board, Otonabee Region Conservation Authority, Ganaraska Region Conservation Authority, Kawartha Conservation Authority, the Ontario Ministry of Natural Resources and Forestry, other municipalities, the County of Peterborough, the City of Kawartha Lakes, etc.	Twp.	Other providers	*			*
1.2.2	Continue to interact and collaborate with community-based non-profit and not-for-profit groups who provide culture and recreation programming and facilities, service clubs, churches, relevant Committees of Council, established interest groups such as the Baxter Creek Watershed Alliance, and community groups such as the Green Hills Arts Council. See many of the Actions recommended in Objective 1.1 .	Twp.	Other providers Committees Councils	*			*

Objective 1:3: Gradually Increase the Level, Comprehensiveness and Quality of Marketing of Leisure Resources, Programming and Events.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
1.3.1	As the amount, range and quality of programming increases, and the population increases and changes, there will soon be a need for a twice-annually Leisure Services Program Guide that lists all scheduled programs and events, parks, facilities, service providers, and any other information that the Municipality decides to include in the catalogue (digital and paper versions).	Twp.	Other providers	*			*
1.3.2	Other means of promotion will be required and should include at least the following: <ul style="list-style-type: none"> ▪ advertising on the screens at the CMCC, ▪ the Municipal web site, ▪ the Millbrook Times newspaper, and ▪ the various social media platforms that the Municipality employs. 	Twp.	Other providers	*			*

Strategic Direction Two: Provide an Increasingly Enhanced and Well-Connected Parks and Open Space System.

Objective 2.1: Establish a Hierarchy of Municipal Parkland and Public Open Space.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.1.1	<p>Recommended Hierarchy of Parks and Open Space The following three-tiered hierarchy of municipal parkland and public open space is recommended. It was introduced in the Background Report and was used to assess existing parkland and public open space. The hierarchy is briefly described below. For more detail, refer to the “Park/Open Space Classification System and Associated Planning Guidelines” in Chapter 6.</p> <p>It is recommended that this hierarchy and the planning guidelines be officially endorsed by Township Council and considered during the development of the new Cavan Monaghan Official Plan.</p> <p>Community Parkland These are usually larger parks that can be either ‘active’ or ‘passive’ in their purpose and use – or sometimes a combination of both. With their community-wide draw, they are intended to accommodate large scale indoor and outdoor culture and recreation facilities, but they can also include natural heritage features. Examples of Community Parks include the Cavan Monaghan Community Centre, Peace Park, Maple Leaf Park, Old Millbrook School Park, Station Park, and the lands containing the Millbrook Valley Trail network.</p> <p>Neighbourhood Parkland These are smaller parks, with lower scale facilities, intended to be both ‘active’ and ‘passive’ in purpose. Although they are typically</p>	Twp.		*			*

<p>more focused on serving the needs of younger age groups, they should also be appealing to adults as a place of relaxation and social interaction. The principal draw of this type of park is the surrounding neighbourhood in which they are located. Examples include Highlands Park, Edgewood Park and Cedar Valley Park.</p> <p>Natural Heritage Open Space</p> <p>The Township has acquired and will continue to acquire open space lands that comprises Provincially, Regionally and Locally Significant wetlands; watercourses; woodlands; Areas of Scientific Interest (ANSIs), hazard lands (e.g., steep slopes, flood prone areas); and sources of drinking water. Because there will be a significant amount of this type of public open space and many of the acquired properties will be entirely or mostly sensitive/fragile in nature, it is recommended that a separate category of public open space be established. Although some of these lands will be too sensitive to support any use other than scientific research, some will be able to accommodate low impact uses such as walking, hiking, bicycling and cross-country skiing on trails; geocaching; picnicking in designated areas; and nature appreciation.</p> <p>One example of this type of public open space is the large tract land directly south of the Towerhill South community. It extends south to Station Trail and connects across the trail to the two linear open spaces containing tributaries of Baxter Creek, south of Millbrook South Cavan elementary school.</p> <p>Another is the large tract of Township-owned open space that abuts Old Millbrook School Park on the south.</p>						
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Objective 2:2: Work Toward Alleviating the Deficiency of Neighbourhood Parkland in the Millbrook Settlement Area and the Hamlets.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.2.1	<p>Strategy to Alleviate the Neighbourhood Park Deficiency The following are some of the strategies that can be employed to help mitigate Neighbourhood parkland gaps and shortfalls. In some instances, one or more approaches can be used in combination. Neighbourhood parkland deficiency was discussed in detail in the Background Report and was noted in Chapter Two.</p> <ul style="list-style-type: none"> ▪ As opportunities arise, purchase land to create new Neighbourhood parks, enlarge a particularly small park or enlarge a school site to create sufficient space to incorporate typical Neighbourhood park functions. ▪ Improve the functionality and appeal of a poor quality Neighbourhood park through redevelopment/rejuvenation - and if possible and required, through enlargement. ▪ In park-deficient areas, designate appropriate undeveloped Township-owned, open space as 'parkland' and develop those properties into Neighbourhood parks. ▪ Partner with a school board to enhance a portion of an existing or new school property to provide the functions of a Neighbourhood park. ▪ Where feasible, partner with a Conservation Authority to create a Neighbourhood park on appropriate Conservation Authority land. 	Twp.	<p>School boards</p> <p>Conservation authorities</p> <p>Service clubs</p> <p>Other landowners</p> <p>Community fundraising</p>	*			*

	<ul style="list-style-type: none"> ▪ Where there is interest, partner with other landowners (e.g., a church or service club) to create a publicly available Neighbourhood park. An example is Harvest Community Park located at Millbrook Christian Assembly church in Millbrook. ▪ Where feasible, design and develop a portion of a Community park to provide Neighbourhood park functions (creating an imbedded Neighbourhood park). Examples include Peace Park and Old Millbrook School Park. ▪ Since access to parkland is greatly reduced when children have to cross a busy street, utilize signalized crosswalks and intersections to reduce the barrier effect created by major roads. 						
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Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.2.2	<p>Establish a New Neighbourhood Park in the Millbrook Settlement Area</p> <p>Consider acquiring the undeveloped property that abuts Millbrook South Cavan ES on the west and fronts onto Brookside Street. This neighbourhood has no Neighbourhood parkland. The only recreational/open space asset is the school and physical access to the school is limited from the west.</p> <p>The identified property has ample street frontage. A tributary of Baxter Creek abuts the property along its southwest edge. The property is relatively level and would make an excellent Neighbourhood park. Strong pedestrian access through the park to the school can be achieved.</p> <p>If the property is acquired, prepare a park plan to guide its development.</p>	Twp.		*			
		Twp.	Specialists	*	*		

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.2.3	<p>Millbrook South Cavan Elementary School Regardless of the ability to acquire and develop the property noted in Action 2.2.2 into a Neighbourhood park, it would be advantageous to the community and to Millbrook South Cavan Elementary School to improve the facilities in the school yard. Therefore, if the school board agrees, it is recommended that the school yard be designed and redeveloped to optimize and improve outdoor facilities for school use, and to create a more park-like setting with increased community access to the property to help alleviate the deficiency of Neighbourhood parkland in this part of Millbrook.</p> <p>The school's small rectangular field is regularly used by Maple Leaf Cavan FC for practice. If the field was improved and well maintained, it could serve a higher purpose within the Club's successful soccer program. If the ball diamond outfield was slightly enlarged, it could be programmed by the Cavan Youth Softball Association for T-Ball.</p>	Twp.	KPRDSB	*	*		
2.2.4	<p>Establish a New Neighbourhood Park in the Millbrook Settlement Area Establish a Neighbourhood park on the 1.14 ha. Township-owned property adjacent to the Fairground on the east. This neighbourhood does not have a Neighbourhood park.</p> <p>It is recommended that a design be prepared for this park and the park be fully developed in the near term. The current informal vehicular road that accesses the Fairground from Frederick Street through this property will have to be shifted to the west onto the Fairground lands or along the side of the property to allow the creation of the park.</p>	Twp.	Specialists	*	*		

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.2.5	<p>Establish a New Neighbourhood Park in the Millbrook Settlement Area</p> <p>Two contiguous properties in the vicinity of the Wastewater Treatment Plant on Centennial Lane have been dedicated to the Township as parkland. Combined, they total 0.86 ha/2.13 ac. Together, they will make and excellent Neighbourhood park in a part of the community that is deficient in Neighbourhood parkland.</p> <p>The properties have a narrow point of access off Centennial Lane that might be able to be widened if a small portion of the adjacent land to the east that is associated with the wastewater treatment facility is added to the proposed park – providing increased physical and visual access to the park.</p> <p>There is also a pedestrian linkage/walkway that connects the park to Coldbrook Drive.</p> <p>Preparing a design for this park and developing it in the near future should be a priority, given that the adjacent residential area is almost fully developed, augmented by the absence of Neighbourhood parkland in this part of Millbrook.</p>	Twp.	Specialists	*	*		

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.2.6	<p>Create a Combination Neighbourhood/Community Park within the Remaining Lands at the Cavan Monaghan Community Centre (CMCC)</p> <p>Since the CMCC is a signature facility serving the entire Township, the outdoor facilities located there should be scaled to have community-wide appeal. However, because the developing residential community to the west (Towerhill North) does not have any neighbourhood parkland within the southern half of the development, it is recommended that the outdoor space at the CMCC double as both a Neighbourhood and Community park.</p> <p>Fortunately, some of the facilities that are typical of a Neighbourhood park have already been provided as part of the community centre development (a playground, a small-scale outdoor fitness gym, sitting areas and a display garden).</p> <p>It is recommended that the remaining area north and west of the community centre building be designated for other recreation facilities to meet both neighbourhood and Township-wide needs.</p> <p>It is recommended the following types of additional facilities be considered for this area:</p> <ul style="list-style-type: none"> ▪ a waterplay facility ▪ 4 pickleball courts with room set aside to expand to 6 and 8 as demand warrants ▪ a basketball/multi-sport court ▪ a tennis court (with room to add another later and light) ▪ 4 beach volleyball courts (phased 2+2) ▪ a skateboard facility (4,000 ft² for Phase One – expanding to 7,000 ft² in the future, as demand warrants) 	Twp.	Specialists	*	*	*	

	<ul style="list-style-type: none"> ▪ a gazebo/shade structure/picnic pavilion ▪ pathways that connect the facilities (compacted limestone screening or paved) ▪ benches located strategically along the pathways, each bench with a shade tree ▪ other shade trees where appropriate <p>Pedestrian Link – It will be essential to provide a lit, hard-surface pedestrian/bicycle link from all of the facilities at the CMCC to the residential community of approximately 2,000 people that is planned for the area directly adjacent to the community centre on the west (Towerhill North).</p> <p>Detailed planning and preparation of a conceptual design for the remaining lands at the CMCC is one of the objectives of Phase Three of this planning process. Upon approval of Township Council, those tasks have been identified for completion in 2024.</p>	Twp.	Township Council Specialists	*			
2.2.7	<p>Partnership in the Development and Maintenance of the Future School within the Towerhill North Community</p> <p>A future elementary school has been identified within the southwestern portion of the Towerhill North development. Since there will be no Neighbourhood parkland in the southern half of this community, it will be prudent for the Township to partner with whichever school board options this property to incorporate Neighbourhood park facilities and features into the school yard. The partnership should comprise a capital investment by the Township to allow the school property to be enhanced. The partnership should also comprise an ongoing shared maintenance agreement to ensure that the outdoor facilities are maintained to park-like standards to support community and school programs. If a community association is formed, it may also be able to join the partnership to assist with fundraising and ongoing stewardship of the property.</p>	Twp.	School board Potential community association Specialists	*	*		*

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.2.8	<p>Establish Two New Neighbourhood Parks within the Towerhill North Community</p> <p>Two undeveloped Neighbourhood parks are located in the northwest corner of this community. The most northerly park is 0.3 ha and the one in the central north is 0.26 ha.</p> <p>It is recommended that the Township work with the developer to grade and seed the park properties and prepare a development plan for each that is informed by Vision 2035 and with input from Municipal staff. The purpose of these parks and the selected facilities should align with what is intended for Neighbourhood parks.</p>	Twp.	Developer	*	*		
2.2.9	<p>Establish a New Neighbourhood Park in Mount Pleasant</p> <p>The Mount Pleasant County Estates plan of subdivision identifies a 0.26 ha Neighbourhood park to be located at the end of “B” Street, with an acceptable amount of frontage on that street. This will be the first park to be located in Mount Pleasant, and because of that, it should be high priority to develop.</p> <p>It is recommended that the Township work with the developer to grade and seed the park property and prepare a development plan that is informed by Vision 2035 and with input from Municipal staff. The purpose of the park and the selected facilities should align with what is intended for Neighbourhood parks.</p>	Twp.	Developer	*	*		

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.2.10	<p>Harvest Community Park Millbrook Christian Assembly Church has developed this high-quality Neighbourhood park on their property within a part of Millbrook that is Neighbourhood park-deficient. It is recommended that the Township collaborate with the church as required to maintain this important recreation resource for the neighbourhood and the church communities.</p>	Twp.	Christian Assembly Church				*
2.2.11	<p>Old Millbrook School Park Although Old Millbrook School Park is classified as a Community Park, it should be considered a dual-purpose park (Neighbourhood and Community). This is because there are no Neighbourhood parks within this part of the township, and this park already functions as a Neighbourhood park.</p> <p>Refer to Action 2.5.4 for specific recommendations to guide the expansion and enhancement of this park.</p>	Twp.	EarlyON Public Library	*	*	*	
		Twp.	Specialists				
2.2.12	<p>Peace Park Although Peace Park is classified as a Community Park, it should be considered a dual-purpose park (Neighbourhood and Community). This is because there are no Neighbourhood parks within this part of the Township.</p> <p>Refer to Action 2.5.3 for specific recommendations to guide the enhancement of this park.</p>	Twp.		*	*	*	
		Twp.	Public Library Specialists				

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.2.13	<p>Establish Two New Neighbourhood Parks within the Future CSU Community (west of Towerhill South)</p> <p>A narrow strip of land that roughly incorporates the old railway bed that traverses this subdivision in a north-south orientation along its eastern edge has been dedicated as parkland.</p> <p>It should be possible to create two Neighbourhood parks associated with this linear park where it widens at Fallis Line and “B” Street (adjacent to the storm water management property), as well as at the southern end of “A” Street where the linear park fronts onto to the street. The trail that will be routed along the liner park should be incorporated into the Neighbourhood parks.</p> <p>There are two stormwater management properties located within this development. One is located directly to the east of the linear park and proposed Neighbourhood parks at Fallis Line. The other is located at the southern end of the residential area, with a physical link to the linear park and proposed Neighbourhood park noted above. It is recommended that the stormwater management properties be engineered, landscaped and developed to seamlessly complement the adjacent parkland at both ends of the linear park.</p> <p>It is recommended that the Township work with the developer to grade and seed the park properties (including the linear properties and the SWM facility) to become Neighbourhood parks and prepare a development plan for each that is informed by Vision 2035 and with input from Municipal staff. The purpose of the park and the selected facilities should align with what is intended for Neighbourhood parks.</p>	Twp.	Developer	*	*		
		Implementation		Timing/Phasing			

Actions		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.2.14	<p>Establish a New Neighbourhood Park within the Future Residential Community Located Southeast of the Intersection of County Road 10 and Fallis Line (Vargas)</p> <p>A 0.29 ha Neighbourhood park has been dedicated in this future community. It is located in the center of the residential area and abuts a large area of natural heritage open space that will be dedicated to the Municipality (14.54 ha) comprising much of the eastern half of the development lands.</p> <p>It is recommended that the Township work with the developer to grade and seed the park property and prepare a development plan that is informed by Vision 2035 and with input from Municipal staff. The purpose of the park and the selected facilities should align with what is intended for Neighbourhood parks.</p>	Twp.	Developer	*	*		
2.2.15	<p>Establish a New Neighbourhood Park in the Future Springville Heights Community (located at Highway 7 and Ashley Crescent)</p> <p>The plan of subdivision does not provide any land that could be developed into a Neighbourhood park. The only dedicated public open space is a 0.8 ha/1.98 ac area of natural heritage land at the intersection of Cathcart and Ashley Crescents.</p> <p>This part of the township is very deficient in Neighbourhood parkland, with the only park being Peace Park on Davis Road south of Maple Grove Road.</p> <p>It is recommended that the Township acquire one of the building lots that abuts the dedicated natural heritage property (lot 4, 5 or 6). Once the property is acquired, it is recommended that a design be prepared and it be developed as a Neighbourhood park, informed by Vision 2035.</p>	Twp.	Specialist	*	*		

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.2.16	<p>Continually look for opportunities to establish a Neighbourhood park in each of the hamlets that do not have a Neighbourhood park, and where there isn't a current residential development plan that will provide a Neighbourhood park.</p> <p>The hamlets that don't have a Neighbourhood park and where there are no current plans to establish one include the following:</p> <ul style="list-style-type: none"> ▪ Cavan, ▪ Ida, ▪ Springville (see Action 2.2.15), ▪ Fraserville, ▪ South Monaghan, and ▪ Baillieboro. 	Twp.	Developers	*	*	*	*

Objective 2.3: Acquire, Protect and Enhance Natural Heritage Open Space.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.3.1	<p>Natural Heritage Open Space Adjacent to the Fairground to the South and East</p> <p>The 4.13 ha. Township-owned open space south and east of the Fairground is considered natural heritage land and contains Baxter Creek and other sensitive features.</p> <p>It is recommended that this property be officially designated as municipal parkland within the ‘Natural Heritage Open Space’ category as introduced in Action 2.1.1.</p> <p>This new Natural Heritage parkland will complement the proposed new Neighbourhood park that is recommended in Action 2.2.4. Access to this Natural Heritage Open Space property for low impact recreation uses can be established from the proposed new Neighbourhood park and the unopened road allowance that parallels the property on the east (Anne Street). Another point of access can be achieved from the unopened road allowance at the foot of Main Street. A section of the Millbrook Valley Trails (Baxter Creek Trail) traverses through this property, with an access point at the southern end of Main Street.</p>	Twp.		*			

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.3.2	<p>Two Natural Heritage Open Space Properties Adjacent to the Wastewater Treatment Plant</p> <p>Two 2.91 ha/7.26 ac and the 1.34 ha/3.3 ac Township-owned undeveloped properties on either side of the Wastewater Treatment Facility off Centennial Lane have been dedicated as natural heritage lands.</p> <p>It is recommended that these properties be officially designated as municipal parkland within the ‘Natural Heritage Open Space’ category as introduced in Action 2.1.1.</p>	Twp.		*			
2.3.3	<p>Natural Heritage Open Space South of Old Millbrook School Park</p> <p>It is recommended that the Township-owned 3.89 ha/9.61 ac property directly south of Old Millbrook School Park be officially designated as parkland under the ‘Natural Heritage Open Space’ category and added to the park.</p> <p>When the plan is prepared for this park, the natural heritage portion should be assessed to determine its natural heritage assets and if it can accommodate any low impact recreation activities. The unopened road allowance along the southern edge of the park should also be assessed for natural heritage assets.</p> <p>See Action 2.5.4 for additional recommendations for this park.</p>	Twp.	Township Council Specialists	*	*		

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.3.4	<p>Natural Heritage Open Space at the Foot of Darling Crescent (in the rural community south of Stewart Line and east of Winslow Quarter Line)</p> <p>It is recommended that this 'pie-shaped' 0.6 ha/1.49 ac Township-owned undeveloped property within this rural community be officially designated as municipal parkland within the 'Natural Heritage Open Space' category as introduced in Action 2.1.1.</p> <p>The property is within the Natural Core area of the Natural Heritage System identified in the Township Official Plan and contains a tributary of Cavan Creek near its headwaters.</p>	Twp.	Township Council	*			
2.3.5	<p>Natural Heritage Property Southwest of Tapley Quarter Line and County Road 21</p> <p>This former landfill property has recently been declared safe for public use by the Ministry of the Environment. It fronts onto County Road 21 and contains the convergence of two streams that are part of the Baxter Creek watershed.</p> <p>It is recommended that this 9.33 ha/23.05 ac property be officially designated as municipal parkland within the 'Natural Heritage Open Space' category as introduced in Action 2.1.1.</p> <p>It is further recommended that a management plan be prepared for this property to assess its opportunities and constraints to guide its future development for public uses.</p>	Twp.	Township Council	*			
		Twp.	Specialists		*		

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.3.6	<p>Three Properties within the Tapley Quarter Line Rural Community It is recommended that these contiguous Township-owned properties that front onto Tapley Quarter Line be officially designated as municipal parkland within the ‘Natural Heritage Open Space’ category as introduced in Action 2.1.1.</p> <p>All are within the Oak Ridges Moraine, specifically the ‘Rural’ designation – also Category #1 of the ORM Landform Conservation category. The three properties contain a stream.</p>	Twp	Township Council	*			
2.3.7	<p>Unopened Road Allowance at the Foot of Anne Street It is recommended that this Township-owned road ROW that comprises 0.53 ha/20 1.3 ac be officially designated as municipal parkland within the ‘Natural Heritage Open Space’ category as introduced in Action 2.1.1.</p> <p>This ROW separates the Township-owned natural heritage property to the west and ORCA lands to the east. It provides another point of access to these lands.</p>	Twp.	Township Council	*			

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.3.8	<p>Four Properties within a Partially Developed Rural Community in the Southeast corner of Dranoel Road and Highway 7a</p> <p>It is recommended that these Township-owned properties that comprise 8.26 ha/20.41ac be officially designated as municipal parkland within the ‘Natural Heritage Open Space’ category as introduced in Action 2.1.1.</p> <p>The northern two properties are almost entirely within a Provincially Significant Wetland and are within the Oak Ridges Moraine Core Area.</p> <p>One third of the central property is within a Provincially Significant Wetland and about half of the property is within the Natural Linkage Area and Natural Core Area.</p> <p>Two thirds of the southern property is within a Provincially Significant Wetland and is within the Natural Core Area all of the properties are within an Area of Natural and Scientific Interest (ANSI).</p>	Twp.	Township Council	*			
2.3.9	<p>The 5.06 ha/12.5 ac. Parcel of Land containing the Mill Pond in Millbrook and the Wetland to the South</p> <p>It is recommended that this Township-owned property be officially designated as municipal parkland within the ‘Natural Heritage Open Space’ category as introduced in Action 2.1.1.</p>	Twp.	Township Council	*			

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.3.10	<p>Unopened Road ROW Bisecting the Millbrook Conservation Area and Abutting Township-owned Land It is recommended that this 1.07 ha/2.65 ac Township-owned unopened ROW be officially designated as municipal parkland within the ‘Natural Heritage Open Space’ category as introduced in Action 2.1.1.</p> <p>Due to its location, this is an important property that adds to the land south of Old Millbrook School Park and joins that natural heritage property to the Millbrook Conservation Area.</p>	Twp.	Township Council	*			
2.3.11	<p>Other Natural Heritage Open Space Properties Identified in Current Draft Plans of Subdivision The draft plans of subdivision for Mount Pleasant County Estates and Springville Heights identify natural heritage lands to be dedicated to the Municipality at the time of development.</p> <p>It is recommended that when the Municipality takes possession of these lands that each be officially designated as parkland under the ‘Natural Heritage Open Space’ category that was introduced in Action 2.1.1.</p> <p>It is further recommended that each property be assessed to determine their natural heritage assets and if all or a portion of each property can accommodate low impact recreation uses, especially a recreational trail.</p>	Twp.	Township Council Specialists	*	*	*	*

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.3.12	<p>Adopt Canada’s Natural Heritage Conservation Program The internationally inspired “Natural Heritage Conservation Program” (NHCP) is a national program that establishes new protected and conserved areas by working with partners across Canada to secure ecologically sensitive private lands and private interests in lands.</p> <p>The Program has two main objectives:</p> <ul style="list-style-type: none"> i) Contribute to protecting 25% of Canada’s lands and inland waters by 2025 and working towards 30% by 2030; and ii) Contribute to strengthening protection and recovery of species at risk and their habitats. <p>In addition to protecting biodiversity, protected areas also play an important role in supporting society through the goods and services they provide, including for climate change adaptation and mitigation.</p> <p>The NHCP is delivered through agreements with the Nature Conservancy of Canada, Ducks Unlimited Canada, and Wildlife Habitat Canada, in collaboration with the Alliance of Canadian Land Trusts on behalf of local and regional land trusts.</p> <p>Over half of Cavan Monaghan Township comprises natural heritage lands, including a portion of the Oak Ridges Moraine and other important natural areas and linkages (Provincially Significant and other wetlands, significant woodlands, prairies, fish spawning area, Areas of Natural and Scientific Interest, floodplain areas, and watercourses) which are oriented in a northeast-southwest pattern across the entire</p>	Twp.	<p>Kawartha Land Trust</p> <p>Baxter Creek Watershed Alliance</p> <p>Nature Conservancy of Canada</p> <p>Ducks Unlimited</p> <p>ORCA</p> <p>Wildlife Habitat Canada</p>	*	*	*	*

	<p>Township. A good portion of the Millbrook Settlement Area is comprised of natural heritage lands identified in the Official Plan as part of the Natural Heritage System.</p> <p>Within areas of residential, commercial and industrial development and redevelopment, these lands are identified and will be protected. They should become part of the Parks and Open Space System under the category of Natural Heritage Open Space (as recommended in Vision 2035).</p>						
2.3.13	<p>Encourage National, Provincial, Regional and Local Groups to Identify, Acquire and Protect Natural Heritage Lands and Species at Risk.</p> <p>Dedicated groups like the Nature Conservancy of Canada, Ducks Unlimited Canada, and Wildlife Habitat Canada, in collaboration with the Alliance of Canadian Land Trusts on behalf of local and regional land trusts across the country are actively acquiring natural heritage lands and working municipalities, conservation authorities, local natural heritage groups, and private land owners to identify and protect the most valuable lands through land trusts, conservation easements agreements, private nature reserves, and other mechanisms.</p> <p>Locally, the Kawartha Land Trust and the Baxter Creek Watershed Alliance (BCWA) are active in this endeavour. The closest property under a Conservation Easement Agreement is the 240 acre Ballyduff Trail network near Pontypool. It contains wetlands, a cold-water stream at the headwaters of Fleetwood Creek, and a rare area of tall grass prairie.</p> <p>It is recommended that the Municipality work with and support the efforts of all groups who strive to identify, acquire and protect valuable natural heritage lands within the township.</p>	Twp.	<p>Kawartha Land Trust</p> <p>BCWA</p> <p>Nature Conservancy of Canada</p> <p>Ducks Unlimited</p> <p>ORCA Wildlife Habitat Canada</p>	*	*	*	*

Objective 2.4: Acquire a Large Park for Sports/Active Recreation and/or Participate in the Provision of Shared Regional Facilities.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.4.1	<p>Two scenarios are emerging regarding a future sports park. One or both of which could meet the current and future indoor and outdoor culture and recreation facilities needs of the Township. It may be that the best solution is a hybrid of both scenarios.</p> <p>Scenario One Establish a second sports/active recreation park within the township to accommodate major indoor and outdoor recreation facilities to meet current and future needs.</p> <p>Utilize the following criteria to identify and evaluate candidate properties.</p> <ul style="list-style-type: none"> ▪ The property should contain at least 10 ha of table land to support required facilities. ▪ The property should be highly visible and easily accessible. ▪ A location near the Millbrook Settlement Area is preferred. ▪ The property can be larger than 10 ha of table land and can contain other features that support active and passive, as well as nature-oriented leisure pursuits. <p>Scenario Two As will be discussed further in Action 3.1.1, there may be an opportunity for a number of municipalities and other service providers to collaborate to purchase land and build, operate and program one or more large regional culture and recreation facilities/complexes that would comprise both outdoor and indoor facilities, some of which are beyond the ability of any one municipality or other service provider to build and operate on their own. Of note is the fact that a joint venture such as this is</p>	Twp.	Specialists	*	*	*	

<p>typically an important criterion of federal/provincial grant programs.</p> <p>One or more of these potential regional facilities may be located west of the City of Peterborough and therefore be easily accessible to Cavan Monaghan residents.</p> <p>Examples of types of facilities that could be included in one or more of the regional complexes are:</p> <ul style="list-style-type: none"> ▪ an indoor swimming pool, ▪ multiple ice surfaces, ▪ a large field house to accommodate several soccer pitches, ▪ trails, ▪ an indoor tennis centre, ▪ an indoor pickleball centre, ▪ a fitness/wellness centre, ▪ a large gymnasium, ▪ a seniors social/recreation/wellness centre, ▪ clusters of high-quality lit ball diamonds and fields, ▪ a running track, ▪ a large waterplay facility, ▪ a large outdoor event space, and ▪ a regional arts centre. 						
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Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.4.2	<p>If Scenario One is pursued, the following is recommended: Based on the above criteria, and as soon as possible, search for and evaluate candidate sites for a Township sports park.</p> <p>Select and acquire the preferred property.</p> <p>Prepare a conceptual design for the park, based on site characteristics and identified facilities.</p> <p>Develop the park over time as demand warrants and financial resources are available.</p>	Twp.	Specialists	*	*	*	
2.4.3	<p>Scenario Two: It is recommended that the Municipality continue to engage in discussions with all interested parties to explore the potential for regional indoor and outdoor culture and recreation facilities/complexes that meet the objectives of the Township and are achievable and sustainable.</p> <p>If this becomes the preferred scenario, consider partnering with other providers to invest in, build and operate facilities that are of interest to the Township to meet current and future needs.</p>	Twp.	Specialists	*	*	*	
2.4.4	<p>Hybrid Scenario It may be that a hybrid of both scenarios is pursued with some of the needs of the Municipality met by each.</p>	Twp.	Specialists	*	*	*	

Objective 2.5: Systematically Rejuvenate Existing Municipal Parks.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.5.1	<p>Maple Leaf Park Maple Leaf Park is a large sports park with two full-size lit soccer fields and two intermediate-size ball diamonds (one lit), and a large natural heritage area comprising woodland and wetlands. The park has good visibility and vehicular access off County Road 10. Near the entrance to the park is a newer building with washrooms and a shaded picnic area adjacent to a junior/senior play structure. A main pathway of compacted limestone screenings links the four main sports fields and terminates at the most easterly soccer field. Given the extent, importance and restrictions associated with the natural heritage portion of the park, there is limited remaining space for additional facilities.</p> <p>Design and Management Recommendations:</p> <ul style="list-style-type: none"> ▪ Maintain and upgrade 2005 play equipment to ensure they conform to current CSA safety standards. ▪ Remove existing play surface and replace with ‘Fibar mulch’ to a depth suitable for the fall height of the play equipment. ▪ Consider adding an additional play area at the far east end of the existing main pathway to broaden the play experience and allow better parental observation from the easterly sports fields. ▪ Consider this park as the location for a future waterplay facility. ▪ To meet accessibility standards, provide a 2m wide pathway that connects the picnic pavilion and surrounds the play equipment area. The path should be constructed with either compacted limestone screenings (least accessible) or a paved surface of asphalt or concrete (most accessible). Benches on concrete pads should be placed along the edge 	Twp.	Maple Leaf Cavan FC	*	*	*	

	<p>of the pathway with enough adjacent rest space to accommodate a wheelchair.</p> <ul style="list-style-type: none"> ▪ For sun protection, add shade trees in key locations along paths of travel and around the playground(s). Also add a picnic pavilion to support tournaments, group picnics and other types of medium to large group events. ▪ Given that the Hamlet of Cavan does not have a Neighbourhood park, meet some of the recreational needs of local residents within Maple Leaf Park (e.g., playground, walking paths, picnic shelter, leash-free dog park and soccer fields). ▪ When the proposed sports park is acquired, create a ball facility in that park to meet the current needs of the community. ▪ When the new ball facility is constructed, replace the two ball diamonds at Maple Leaf Park with a full-size lit, irrigated natural turf soccer field. If the new field is located directly west of the other two fields, existing lighting could be shared with the soccer field to the east. ▪ Additional parking, spectator stands, and/or smaller recreational facilities could be located to the west of the proposed new field. ▪ To reduce persistent wet conditions on the south side of the main pathway within Maple Leaf Park, consider grading and drainage improvements along the slope from the railway line down into the park. ▪ Given the absence of a Neighbourhood park in the hamlet of Cavan, Maple Leaf Park should be developed with some facilities that could replicate a Neighbourhood park. <p>Based on the above and other input that may emerge, prepare a conceptual plan to guide rejuvenation of this park as demand warrants and resources permit.</p>	Twp.	Specialists	*	*		
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Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.5.2	<p>Cavan Monaghan Community Centre The following is the recommended development strategy for the remaining lands at the Cavan Monaghan Community Centre (CMCC).</p> <p>Refer also to Chapter Six, Section 6.5 for recommendations for the entire community centre building expansion (outdoor and indoor facilities). A high-level General Site Plan for this property is included in Section 6.5 which is intended to guide more detailed planning and design proposed for 2024.</p> <p>Outdoor Spaces The portion of the park directly north of the community centre building comprises a playground, an outdoor fitness gym and a display garden.</p> <p>The following additional facilities are recommended (subject to completion of the planning and conceptual design process that is proposed for 2024 – see below):</p> <ul style="list-style-type: none"> ▪ a significant waterplay facility, ▪ 4 lit pickleball courts (expand to 6 and possibly 8 if demand warrants) ▪ a double lit tennis court to be provided one court at a time to complement the two lit courts proposed to be refurbished at Crestwood SS ▪ 2 beach volleyball courts (leaving space to expand to 4 courts in future – to complement the four courts proposed for Crestwood SS), ▪ 1 basketball/multi-sport court, ▪ a skateboard facility ▪ a gazebo/shade structure/picnic pavilion, 	Twp.		*	*	*	

<ul style="list-style-type: none"> ▪ walkways that connect the facilities (compacted limestone screening or paved), ▪ benches located strategically along the walkways, each bench with a shade tree, ▪ other shade trees where appropriate, and ▪ a hard-surfaced lit walkway that provides pedestrian and bicycle access from this recreation area to the developing residential community to the west. ▪ A retaining wall will be required in the northwest corner of this part of the park to create sufficient flat land to accommodate the recommended facilities. ▪ Additional parking will be required to support the use of the proposed outdoor and indoor facilities, especially since many of the facility users will arrive by personal vehicle from the wider community. Parking requirements will be determined when the conceptual design is prepared (proposed for 2024). ▪ Based on the above and other input that may emerge, prepare a conceptual plan for the remaining lands at the Cavan Monaghan Community Centre. 	Twp.	Specialists	*			
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Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2031	2031-2035	18,000 Pop.	Ongoing
2.5.3	<p>Peace Park</p> <p>Located behind the Bruce Johnston Branch Library, Peace Park is not a highly visible park. It contains 3 independent play structures within a woodchip play surface. There is one residential style shade structure and one picnic table. The remaining property is largely wooded except for an area of lawn around the playground and behind the library. Pedestrian access to the park is through the library parking lot. Traffic noise is present as the property backs onto Highway 7. The wooded area is very wet and drains to the north toward Highway 7. The developed portion of the park could be upgraded to improve its function and the overall quality as a Community park with an imbedded neighbourhood park function. As more people move into this area, its Neighbourhood park function will become more important.</p> <p>The following is recommended with park users and the Public Library program in mind.</p> <ul style="list-style-type: none"> ▪ Maintain and upgrade the play equipment to ensure they conform to current CSA safety standards. ▪ To meet accessibility standards, provide a 2m wide pathway that connects the shade structure, picnic table and surrounds the play equipment area. The path should be constructed with either compacted limestone screenings (least accessible) or a paved surface of asphalt or concrete (most accessible). Benches on concrete pads should be placed along the edge of the pathway with enough adjacent rest space to accommodate a wheelchair. ▪ Plant shade trees in key locations along paths of travel and the playground. ▪ Provide a sufficiently large permanent shade structure suitable for outdoor classes, story telling, picnics and general 						

	<p>shade protection (the structure could have an electrical supply and be suitable for rental bookings).</p> <ul style="list-style-type: none"> ▪ Create a story telling area. ▪ Create a pollinator garden. ▪ Add a 'natural play' space. ▪ Add a basketball/multi-sport court. <p>Based on the above and other input that may emerge, prepare a conceptual plan for Peace Park and rejuvenate as demand warrants and resources permit.</p>	Twp.	Specialists	*	*		
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Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.5.4	<p>Old Millbrook School Park</p> <p>Because of the large playground that is located behind the school building and the EarlyON Child and Family Centre that is accommodated in the old school building, this large Community park provides some Neighbourhood park functions. This is important because this part of the Township is deficient in Neighbourhood parkland. Much of the park is lightly developed, comprising considerable turfed open space and a large parking lot.</p> <p>There is a 3.89 ha/9.62 ac parcel of undeveloped Township-owned open space adjacent to this park on the south (between the park and ORCA lands). A tributary of Baxter Creek flows north and west through this property to the mill pond. In addition, two unopened road allowances comprising 0.83 ha frame the park on the south and west sides. Also, a 0.2 ha/0.49 ac block of Township-owned, non-parkland open space lies within the park.</p>						

<p>Along with the 21.9 ha/54.15 ac ORCA lands to the south ('Millbrook Conservation Area'), these properties are known as Medd's Mountain.</p> <p>Because of the significance of these lands, it is recommended that the unopened road allowances, the 0.2 ha/0.49 ac block of Township-owned, non-parkland open space, and the 3.89 ha/9.62 ac natural heritage property be officially designated as parkland and added to Old Millbrook School Park. That would create a 6.78 ha/16.75 ac Community-scale park that would be comprised largely of natural heritage open space.</p> <p>The southern portion of the park would complement the adjacent Millbrook Conservation Area. Upon an assessment of this southern portion to determine its natural heritage attributes, a determination can be made as to its ability to support any low impact recreation uses.</p> <p>To enhance the park's role as a Community park with an imbedded Neighbourhood park, the following improvements are recommended:</p> <ul style="list-style-type: none"> ▪ Install a shade structure in the vicinity of the playground to support the EarlyON Child and Family Centre program and community use of the playground and the park. ▪ Enlarge the playground to meet the needs of the community and the EarlyON Child and Family Centre. ▪ Add an outdoor fitness gym. Investigate the existing concrete slab as a location for this facility. ▪ Consider this park as a future candidate location of a second waterplay facility (when recreation demand and/or public health needs warrant). Maple Leaf Park has also been identified as a potential location for this second waterplay facility. ▪ Via a stronger open space link, better integrate this park with the proposed downtown park. 	Twp.	Township Council	*			
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	<p>Informed by Vision 2035 and community engagement, complete a conceptual design for this park (including the large natural heritage component). As the design takes shape, consider if all of the park will be required. It may be that a small portion of the park is identified as unnecessary and could be offered for sale, with the proceeds used to purchase additional parkland in an underserved area and/or to help fund the rejuvenation of this park.</p> <p>When the design is completed, begin to add to and rejuvenate the park as demand warrants and resources permit.</p>	Twp.	Specialists	*	*		
		Twp.		*	*	*	

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.5.5	<p>Whitfield Landing</p> <p>Whitfield Landing is an unassuming parkland space. It serves primarily as a boat launch providing access to the Otonabee River. The road and parking system provides ample space for tow vehicles and boat trailers. The boat ramp and dock are in good condition and the combination of limited manoeuvring space to the ramp and the dock size and length both self-control the size of boats that can access the river.</p> <p>Aside from the boat launch facilities there is a narrow peninsula of land extending downstream from the boat launch and dock. This area has a picnic table in poor repair and the area appears to be minimally maintained. This area could be upgraded in a minor fashion to provide a second park use for picnicking, contact with nature and experiencing the river corridor. Such an upgrade would also compliment the boating access by providing a desirable pre- or post-launch picnicking area. The area is prone to seasonal flooding and any improvements should be durable enough to withstand temporary inundation of water. The following is recommended.</p>	Twp.					

<ul style="list-style-type: none"> Maintain and update as needed the current dock and launch ramp. Consider a cellular containment system to hold the ramp material (gravel) in place to provide a smooth trailer transition into the river. If demand warrants, consider widening the launch ramp to accommodate the simultaneous launch of two watercraft. <p>Based on the above and other input that may emerge, prepare a conceptual plan for Whitfield Landing and rejuvenate as demand warrants and resources permit.</p>	Twp.	Specialists	*	*	*	
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Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.5.6	<p>Station Park Station Park is a small Community park that is located at the southern end of the Station Trail that connects King Street to the sidewalk that runs along the west side of County Road 10 just about half way between King Street and Fallis Line.</p> <p>A 0.33 ha triangular shaped property that contains a well (and source of drinking water) was recently purchased by the Township. The new property, which has frontage on Turner and King streets, could provide more land for the improvement of Station Park.</p> <p>The park serves four purposes: i) a trail head for Station Trail, ii) a small picnic shelter, iii) a vehicular access point for the municipal works/parks yard to the north, and iv) community mailboxes (with direct vehicular access through the park).</p> <p>Design and Management Recommendations:</p> <ul style="list-style-type: none"> Integrate the recent property addition to this park into the concept for its future. 						

<ul style="list-style-type: none"> ▪ Consider designing “Station Park Trail” entrance features that are visible from both the King Street and County Road 10 trail entrances. Signage, control gates, benches and some planting would help the trail heads to function better and highlight and coordinate the two main entry points. ▪ Pave the gravel driveway to the mailboxes at the King Street entry to control dust and better define the trail entry from the municipal service entry. ▪ Consider a paint colour change for the pavilion at the King Street entrance. Select colours that are consistent with the existing downtown streetscape report and reflective of the architectural heritage of the downtown. ▪ Consider formalizing the informal community entry points from McGuire Drive and Brookside Street to improve safety and community connectivity to the trail. To a minor extent, the newly defined access points could carry through some of the design elements of the north and south trail heads. ▪ Ensure the surface treatment along the full extent of the trail meets accessibility standards in width, surface treatment and bench resting locations. <p>Based on the above and other input that may emerge, prepare a conceptual plan for Station Park and rejuvenate as demand warrants and resources permit.</p>	Twp.	Specialists	*	*	*	
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Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.5.7	<p>Downtown Park On June 5, 2023, Township Council passed the following resolution:</p> <ul style="list-style-type: none"> ▪ That staff be directed to commence planning for the creation of a community park on the Millbrook Arena lands; and ▪ That the existing users of the Millbrook Arena be permitted to use the existing facility in its current state until the final plans for the community park are approved by Council or that the facility becomes a health and safety concern; and ▪ That Council's direction be carried forward in Phase Two of the Parks and Recreation Plan – Vision 2035. <p>It is recommended that a conceptual plan be prepared for a downtown park to be located on the site of the Millbrook Arena and adjacent lands, including Needlers Lane and possibly some ORCA lands (to be determined by the Conservation Authority).</p> <p>Within Strategic Direction #3 (under various facility categories), specific types of facilities will be identified as 'candidates' to be considered for this park. The emerging list of possible facilities and features will need to be more fully evaluated in Phase Three of this planning process.</p> <p>The 2013 Millbrook Revitalization Study also provided some general directions for the nature of this park.</p> <p>An analysis of the site and other information and regulations will identify opportunities and constraints that will have to be considered when deciding about facilities and the design of the park.</p>	Twp.	Specialists Residents, ORCA, First Nations, & Interest groups	*	*		

<p>As the plan is being conceived, it will be critical to engage the community, and to consult all stakeholders, including ORCA, and all individuals and groups with an interest in the park and downtown Millbrook.</p> <p>First Nation communities will also have to be consulted.</p> <p>The demand and facility assessments, conceptual design, and other deliverables are proposed for 2024 (Phase Three).</p> <p>When the design is approved, it is recommended that the arena be decommissioned, the site be rehabilitated, and construction of the park be initiated as resources permit.</p> <p>Refer to Chapter Six, Section 6.4 for additional commentary on the proposed downtown park.</p>						
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Actions	Implementation		Timing/Phasing			
	Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
<p>2.5.8 Cedar Valley Park Cedar Valley Park is a small rural park fronting on Cedar Valley Road. The park is inconspicuous from the road and has a quaint rural character suitable to the rural residential properties along the road. Access to the park is from Cedar Valley Road and over a lawn area. There is good shade cover from existing mature trees and the play features include a climber, swing set and multi-use/basketball half court.</p> <p>Design and Management Recommendations:</p> <ul style="list-style-type: none"> ▪ To meet accessibility standards, provide a 1.5-2m wide looped pathway that connects and surrounds the play equipment area and links to the multi-use/basketball half court. The pathway should also link to the road to facilitate accessibility between the road and the park. The path should be constructed of either compacted limestone screenings (least accessible) or a paved surface of asphalt or concrete (most accessible). Benches on concrete pads should be placed along the edge of the pathway with enough adjacent rest space to accommodate a wheelchair. Ensure that the pathway around play equipment does not interfere with the resilient safety surface and safety zones around the equipment. ▪ Remove the existing sand play surface and replace with 'Fibar mulch' to a depth suitable for the fall height of the play equipment. ▪ Maintain and upgrade play equipment to ensure they conform to current CSA safety standards. <p>Based on the above and other input that may emerge, prepare a conceptual plan for Cedar Park and rejuvenate as demand warrants and resources permit.</p>	Twp.	Specialists	*	*		

Actions	Implementation		Timing/Phasing			
	Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
<p>2.5.9 Edgewood Park Edgewood Park is a very large neighbourhood park embedded deep into the Edgewood subdivision community of approximately 50-60 homes. It is surrounded by a woodlot and the rear lots of homes with a very narrow frontage access. It contains an independent swing set, a junior play structure within a sand play surface. There is a wood and steel shade structure with a picnic table below.</p> <p>These features currently meet the expectations for a typical neighbourhood park and should serve the Edgewood Park community well. The remaining property is open maintained lawn with varying topography and no specific use. Pedestrian access to the park is via a long gravel laneway connecting to Edgewood Park Road. Visibility into the park is very limited.</p> <p>Design and Management recommendations:</p> <ul style="list-style-type: none"> ▪ Maintain and upgrade the play equipment to ensure they conform to current CSA safety standards. ▪ Remove the sand play surface and replace with 'Fibar mulch' to a depth suitable for the fall height of the play equipment. ▪ To meet accessibility standards, provide a 2m wide pathway that connects the shade structure, and surrounds the play equipment area. The path should be constructed with either compacted limestone screenings (least accessible) or a paved surface of asphalt or concrete (most accessible). Benches on concrete pads should be placed along the edge of the pathway with enough adjacent rest space to accommodate a wheelchair. 						

<ul style="list-style-type: none"> ▪ Plant shade trees in key locations along paths of travel and around the playground. Some shade tree planting has recently been completed along the laneway. ▪ Install a pollinator garden along the laneway. ▪ Add a basketball/multi-sport court. ▪ Add a 'natural play' space. ▪ Enlarge the shade structure to create a small picnic pavilion that would accommodate at least two picnic tables. ▪ At the vehicular entrance to the park, construct controlled access gates or bollards that restrict vehicles but allow and welcome pedestrian access. ▪ The large open lawn area that comprises most of the park could serve one of two purposes: <ul style="list-style-type: none"> i) as a sports facility with appropriate grading changes and buffer tree planting around the perimeter, or ii) as a passive use area with a walking trail around the perimeter of the open area with tree plantings and naturalization areas to reduce the costs of labour and fuel associated with the large mown lawn. The walking trail could include another shade structure and rest area along the new pathway. ▪ Consider a design workshop with members of the Edgewood Park community in order to determine the most locally appropriate design changes to consider. <p>Based on the above and other input that may emerge, prepare a conceptual plan for Edgewood Park and rejuvenate as demand warrants and resources permit.</p>	Twp.	Specialists	*	*		
	Twp.	Specialists	*	*		

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.5.10	<p>Highlands Park Highlands Park is a new Neighbourhood park within a new residential community. The park is a good size, is relatively centrally located within the neighbourhood, and has good street frontage exposure. Facilities and features are well organized and suitable for a Neighbourhood park.</p> <p>Design and Management Recommendations:</p> <ul style="list-style-type: none"> There are no design recommendations or upgrades for this new park. It is recommended that the Municipality monitor the park over the next few years to determine success factors and any lessons learned that can be applied to future parks. Ensure that the new trees on site successfully establish themselves through a watering program until they have viable and self-sustaining root development. Shade for park users and carbon off-setting will be the most valued attribute of all parks in the future. Good canopy cover increases the value of adjacent real-estate. 	Twp.		*			*

Objective 2:6: Design and Develop New Municipal Parks.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.6.1	As new Neighbourhood and Community parks are acquired - and based on the planning and design standards recommended in this Plan, as well as any specific objectives for each park, determine the facilities and features that each should contain. Prepare a sufficiently detailed design to guide the development of each park.	Twp.	Specialists Developer	*	*	*	
2.6.2	As each new park is acquired within a plan of subdivision, ensure that the developer grades and seeds the developable area to align with the conceptual plan for the park.	Twp.	Developer	*	*	*	
2.6.3	After each new park is designed, and based on available resources and potential joint venture opportunities, develop each park - based on the approved design.	Twp.		*	*	*	

Objective 2:7: Design and Engineer Stormwater Management Properties as Community Amenities.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.7.1	Strive to design and engineer existing and new stormwater management properties to be attractive open spaces and to provide community amenities such as naturalized ponds and wetlands, on-site walkways, linkages to the trail network and adjacent parkland, sitting areas/benches, natural landscape viewing areas, unstructured open space, native plants and trees, etc.	Twp.	Developer Specialists	*	*	*	
	Land identified as a “Stormwater Management Facility” should not be included in the calculation of land required for parkland purposes pursuant to the Planning Act, even if a portion of the SWM facility can be developed to provide recreational amenities (either as a separate property or adjacent to a park).	Twp.		*			*

Objective 2:8: Dispose of Unsuitable/Surplus Parkland and Reinvest the Proceeds into Existing and New Parks.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.8.1	<p>Brewda Park This 1.45 ha/3.58 ac property is an undeveloped park that was dedicated to the Township as part of a residential subdivision that did not proceed past the planning stage. The property is accessed from County Road 10 via a narrow ROW.</p> <p>Unless another residential development is planned around this property, it is recommended that the undeveloped park be offered for sale with the proceeds invested in the purchase and/or development of parkland within the Hamlet of Bailieboro settlement area.</p>	Twp.	Council	*			
2.8.2	<p>Old Millbrook School Park When this park is being planned and designed, determine the amount of land required to accommodate desired facilities and park features. If it is determined that a small portion of the park with street frontage is not required, consider offering that portion of the park for sale, with the proceeds invested in the purchase and/or development of parkland in underserved areas and/ or the rejuvenation of this Old Millbrook School Park.</p>	Twp.	Council		*	*	

Objective 2:9: Park and Open Space Policies

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.9.1	<p>Park Acquisition and Development By-law</p> <p>This by-law would speak to what the Municipality expects from the development industry regarding the quality, characteristics, size and location/distribution of parkland to be dedicated at the time of development or cash-in-lieu of parkland. It would also define the role of the developer in preparing dedicated parkland for transfer to the Municipality (e.g., grading, seeding and any other expectations). This information would be integrated into the pre-application and Formal Application Submission processes.</p> <p>The Park/Open Space Classification System and Associated Planning Guidelines included in Chapter Six of this document will provide some of the content for this by-law. Refer to Section 6.2.</p> <p>This by-law will also help to inform “conditions and amendments” documents that support final approval for registration of draft plans of subdivision.</p> <p>It is recommended that such a by-law be drafted, reviewed and passed by Municipal Council.</p>	Twp.	Council	*			

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
2.9.2	<p>Park/Open Space Classification System and Associated Planning Guidelines This document is contained in Chapter Six, Section 6.2.</p> <p>The planning guidelines are intended to guide the implementation of Vision 2035 and inform parkland/open space policy in the new Township Official Plan.</p> <p>It is recommended that Township Council adopt the Park/Open Space Classification System and Associated Planning Guidelines.</p>	Twp.	Council	*			
2.9.3	<p>Provision Guidelines for Culture and Recreation Facilities This document is contained in Chapter Six, Section 6.3.</p> <p>Provision Guidelines have been recommended for all types of culture and recreation facilities. The guidelines help to assess current adequacy and are also used to project future facility requirements in line with the growing and changing population of the township. If demand and/or the population profile changes substantially, some of the provision guidelines will have to be adjusted.</p> <p>Also included are recommendations re: conditions of parkland conveyance and conditions of acceptance of payment-in-lieu of parkland dedication. See Chapter Six, Section 6.2.</p> <p>It is recommended that Township Council adopt the Provision Guidelines for Culture and Recreation Facilities.</p>	Twp.	Council	*			

Strategic Direction Three: Provide Quality Recreation and Culture Facilities to Meet Growing and Changing Needs.

Objective 3.1: Explore the Potential for Regional Culture and Recreation Facilities.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.1.1	<p>Recently, interest has begun to be shown by a number of significant parties in the Peterborough area for the potential to the develop and share regional indoor and outdoor culture and recreation facilities (share in construction, operation, programming and scheduling). Many of these facilities would be beyond the ability of most municipalities and other service providers to build and operate on their own.</p> <p>Another reason for exploring this opportunity is to secure one or more large sites to accommodate facilities that are required today and into the future.</p> <p>A third reason for considering regional facilities is to increase the potential for provincial and federal grants, as well as fundraising and sponsoring.</p> <p>It is recommended that the Township of Cavan Monaghan continue to pursue this opportunity that may provide township residents with access to facilities like an indoor swimming pool, multiple ice surfaces, a large field house, an indoor tennis centre, an indoor pickleball centre, a fitness/wellness centre, a large gymnasium, a seniors social/recreation/wellness centre, clusters of high quality lit ball diamonds and rectangular fields, a running track, a large outdoor event space, a regional arts centre, etc.</p>	Twp.	<p>Municipalities with the 'region'</p> <p>Educational institutions</p> <p>Sport governing/organizing entities</p> <p>Arts entities</p> <p>Political decision makers</p>	*			*

Objective 3.2: Provide and Maintain Ball Diamonds to Meet the Recommended Provision Guideline.

Actions	Implementation		Timing/Phasing			
	Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
<p>3.2.1 Recommended provision guideline for ball diamonds: 1 Level A lit diamond per 10,000 population 1 Level B unlit diamond per 10,000 population 1 Level C unlit diamond per 5,000 population</p> <p>Annually monitor registration statistics and facility bookings for each level of ball diamond. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guidelines need to be adjusted, recalculate future facility requirements and timing.</p> <p>Based on the recommended provision guideline, the following ball diamonds will be required by the target population of 18,000.</p> <ul style="list-style-type: none"> ▪ 1.8 Level A diamonds (2 additional diamonds) ▪ 1.8 Level B diamonds (relocate existing diamonds) ▪ 3.6 Level C diamonds (1-2 additional diamonds and rejuvenate the existing school facilities) 	Twp.		*			*
<p>3.2.2 Provide two lit Level A softball diamonds at the proposed new Cavan Monaghan sports park or in one of the potential regional sports parks.</p> <p>A Level A softball ball diamond is lit, sized for all ages, and has an outfield fence, bleachers, a scoreboard, and changeroom/washroom facilities.</p>	Twp.	Cavan Youth Softball Association	*	*	*	

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.2.3	Provide two unlit Level B softball diamonds at the proposed new Cavan Monaghan sports park or at one of the potential regional sports parks. A Level B softball diamond is unlit, is sized for children and youth, and does not necessarily have an outfield fence.	Twp.	Cavan Youth Softball Association	*	*	*	
3.2.4	When one of the new Level A and one of the Level B softball diamonds are ready for use, remove the two Level B softball diamonds from Maple Leaf Park.	Twp.		*	*		
3.2.5	In partnership with the KPRD school board, refurbish, enlarge slightly and maintain the Level C softball ball diamond at Millbrook South Cavan ES. A Level C softball diamond is unlit, is sized principally for children, and does not have an outfield fence. Sometimes, this level of diamond is called a T-Ball diamond.	Twp.	KPRDSB	*			
3.2.6	In partnership with the KPRD school board, upgrade the scrub diamond at North Cavan ES to a Level C facility. OR When the elementary school is planned and developed in the Towerhill North community, partner with whichever school board options that location to provide and maintain a Level C softball diamond.	Twp.	KPRDSB or PVNCCDSB	*	*		
3.2.7	Maintain each level of ball diamond to the standard established for each. If community groups regularly use school ball diamonds, it will be necessary to assist school boards to properly maintain those facilities during the summer season.	Twp.	School boards				*

Objective 3.3: Provide and Maintain Rectangular Fields to Meet the Recommended Provision Guideline.

Actions	Implementation		Timing/Phasing			
	Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
<p>3.3.1 Recommended provision guideline for rectangular fields: 1 Level A lit field per 4,000 population 1 Level B unlit field per 2,000 population 1 Level C unlit field per 2,000 population</p> <p>Annually monitor registration statistics and facility bookings for each level of field. Adjust the provision guideline to meet changes in demand and facility requirements.</p> <p>If the provision guidelines need to be adjusted, recalculate future facility requirements and timing.</p> <p>Based on the recommended provision guideline, the following rectangular fields will be required by an estimated target population of 18,000.</p> <ul style="list-style-type: none"> ▪ 4.5 Level A fields (1-2 additional fields) - full size/adult lit, irrigated fields – 11v11 (91-119 x 46-91 metres) ▪ 9 Level B fields (4 additional fields in parks and schools + upgrade existing) – 9v9 & 7v7 (32-50 x 50-75 metres) ▪ 9 Level C fields (3 additional fields in parks and schools + upgrade existing) – 5v5 & 4v4 (21-37 x 14-39 metres) ▪ Note: Smaller fields can be set up across larger fields for younger age groups to reduce the need for as many smaller fields. However, that practice limits simultaneous use by different levels of play and older age groups. 	Twp.		*			*

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.3.4	When the two ball diamonds at Maple Leak Park are relocated (as recommended in Action 3.2.3 and 3.2.4), provide a Level A rectangular field in that space. Timing will depend on how quickly a new location can be found for the ball diamonds and they are constructed at the new location. A Level A field is a lit, irrigated full/adult-size pitch. Support facilities include a score board, bleachers, change rooms and washrooms.	Twp.		*	*		
3.3.5	In partnership with the KPRD school board, refurbish and maintain the Level C rectangular field at Millbrook South Cavan ES.	Twp.	KPRDSB	*			*
3.3.6	In partnership with the KPRD school board, refurbish and maintain the Level C rectangular field at North Cavan ES.	Twp.	KPRDSB	*			*
3.3.7	In partnership with whichever school board assumes the school site in Towerhill North, consider providing a Level B or C rectangular field if the property allows.	Twp.	School board	*			
3.3.8	Locate 3-4 Level B fields at the property north of James Strath ES, at the proposed sports park or at the potential regional sports park.	Twp.	Regional partners KPRDSB	*	*	*	
3.3.9	Locate 2-3 Level C fields at the property north of James Strath ES, at the proposed sports park or at the potential regional sports park.	Two.	Regional partners KPRDSB	*	*	*	
3.3.10	As alternative to smaller fields, locate an additional Level A field at the property north of James Strath ES, at the proposed sports park or at the potential regional sports park.	Twp.	Regional partners KPRDSB	*	*		

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.3.11	<p>Maple Leaf Cavan FC should continue to use the small field at Millbrook South Cavan ES for practices, and the Crestwood SS fields, as well as various fields within the City of Peterborough for games and practice (to supplement the facilities in Maple Leaf Park and at Millbrook South Cavan ES).</p> <p>Within the next decade, the main field at Crestwood SS could be upgraded through a partnership between the City of Peterborough, the KPRD School Board, user groups and other entities. In future, there is a possibility that the field could be redeveloped into an artificial turf facility and the field and running track covered year-round.</p> <p>The fields located at the property north of James Strath ES (adjacent to Crestwood SS) should also be rebuilt into either one full-size field or a number of Level B and/or Level C fields (see Action 3.3.8 and 3.3.9). The Township of Cavan Monaghan and the Maple Leaf Cavan FC may be asked to share in the refurbishment of those fields.</p>	Twp.	<p>KPRDSB</p> <p>PTBO.</p> <p>Maple Leaf Cavan FC</p>				*
3.3.12	<p>Maintain each rectangular field to the standard established for each level. It may be necessary to partner with the school boards to properly maintain the fields in school yards that are regularly scheduled for community use.</p>	Twp.	<p>School boards</p> <p>Maple Leaf Cavan FC</p>				*

Objective 3.4: Provide and Maintain Outdoor Tennis Courts to Meet the Recommended Provision Guideline.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.4.1	<p>Recommended provision guideline for outdoor lit tennis courts: 1 lit tennis court per 5,000 population</p> <p>Regularly monitor the use of the tennis courts. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.4.2	<p>Support the City of Peterborough and the KPRD School Board in the planned near-term refurbishing of the two lit tennis courts at Crestwood SS. Even though those courts will be shared with City of Peterborough residents, they should meet the current near-term needs of Township residents. There are plans to upgrade and relocate other tennis courts in the City of Peterborough which will distribute use across multiple facilities.</p>	Twp.	City of Ptbo. KPRDSB	*			
3.4.3	<p>As the population increases toward 15,000 and if demand warrants, provide two lit tennis courts at the Cavan Monaghan Community Centre in phases. Begin with one unlit court and add a second court when demand warrants. Light the facility when the second court is added.</p>	Twp.	Tennis Club or Association		*	*	
3.4.4	<p>If tennis gains sufficiently in popularity in the Township, encourage the establishment of a Tennis Association or Club that can handle court booking, offer programming, apply for grants, and accept donations as a non-profit entity.</p>	Twp.	Tennis enthusiasts		*		*

Objective 3.5: Provide and Maintain Pickleball Courts to Meet the Recommended Provision Guideline.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.5.1	<p>Recommended provision guideline for outdoor lit pickleball courts: 1 lit outdoor pickleball court per 3,000 population</p> <p>Regularly monitor the use of the pickleball courts. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.5.2	<p>To meet anticipated current and near future demand, provide four lit outdoor pickleball courts at the Cavan Monaghan Community Centre.</p> <p>Leave room to enlarge the facility to six and possibly eight lit courts as the population and demand increases toward the target of 18,000.</p> <p>To minimize noise conflict, locate the courts as far away from the future residential area as possible.</p> <p>A wind and sound barrier may be required on the west and north sides of the court fencing at the CMCC.</p>	Twp.	Pickleball enthusiasts	*	*	*	

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.5.3	<p>Continue to support the provision of indoor pickleball via the six courts that have been painted on the arena floor at the CMCC for spring use.</p> <p>Once the outdoor courts are available, interest in the indoor courts may wane somewhat in the summer months. However, the indoor facility will likely be used on rainy and cool days, as well as on days when the temperature is too hot for outdoor activity.</p>	Twp.	Pickleball enthusiasts	*			*
3.5.4	If the proposed gymnasium is added to the CMCC, establish a winter pickleball program. Such a program is an excellent way to utilize non-prime time in the gym, especially on weekdays.	Twp.	Pickleball enthusiasts		*	*	
3.5.5	As pickleball gains in popularity in the Township, encourage the establishment of a Pickleball Association that can handle court booking, offer programming, apply for grants, and accept donations as a non-profit entity.	Twp.	Pickleball enthusiasts	*	*		*

Objective 3.6: Provide and Maintain Outdoor Basketball/Multi-Sport Courts to Meet the Recommended Provision Guideline.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.6.1	<p>Recommended provision guideline for outdoor basketball/multi-sport courts: 1 full size basketball/multi-sport court per 3,000 population</p> <p>Regularly monitor the use of the basketball/multi-sport courts. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>There is an adequate supply of basketball courts for the current population.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.6.2	<p>To support additional uses and optimize utilization (e.g., basketball practice, three-on-three or five-on-five streetball, ball hockey, etc.), install a 3 - 4 foot fence at the ends of existing and future courts, and install 2 - 4 backboards and hoops along the sides of the courts.</p>	Twp.		*	*	*	

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.6.3	<p>To meet future needs as the population increases toward the target population of 18,000, three additional basketball/multi-sport courts will be required.</p> <p>The following are candidate locations for future facilities. Only three locations will be required to meet the recommended provision guideline.</p> <ul style="list-style-type: none"> ▪ At the CMCC. ▪ Old Millbrook School Park. ▪ Peace Park. ▪ Edgewood Park. ▪ The proposed Neighbourhood park beside the Fairground. ▪ The proposed Neighbourhood park near the wastewater treatment plant. ▪ The southern-most Neighbourhood park proposed in the community to be located west of the Towerhill South community (CSU). ▪ The Neighbourhood park identified in the future community to be located southeast of the intersection of Fallis Line and County Road 10 (Vargas). ▪ The future elementary school in the Towerhill North community. ▪ One of the Neighbourhood parks identified in the northern part of the Towerhill North community. ▪ The future Neighbourhood park planned for Mount Pleasant (Mount Pleasant Country Estates). 	Twp.		*	*	*	
		Twp.	Bd of Ed.				

Objective 3.7: Provide and Maintain Beach Volleyball Courts to Meet the Recommended Provision Guideline.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.7.1	<p>Recommended provision guideline for beach volleyball courts: 1 beach volleyball court per 5,000 population</p> <p>Regularly monitor the use of the beach volleyball courts. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.7.2	<p>Based on the recommended provision guideline and given that there are no courts in the township, two beach volleyball courts will be required to meet the needs of the current population.</p> <p>There is a proposal by Peterborough-based Soul Beach Volleyball to build a four-court beach volleyball facility at Crestwood Secondary School in the near term. The Crestwood Alumni Association may partner with Soul Beach Volleyball to help fund the courts. The KPRD School Board would provide the land for this facility. Since that facility will serve the City of Peterborough and region, it will meet only part of the provision guideline for Cavan Monaghan residents.</p> <p>It is recommended that the Township support this project.</p>	Twp.	<p>Soul Beach Volleyball</p> <p>Crestwood Alumni Assoc.</p> <p>KPRD School Board</p>	*			
3.7.3	<p>To meet current and future needs as the population increases toward the target population of 18,000, a total of four beach volleyball courts will be required for township residents. To meet that objective, it is proposed that four courts be provided in phases at the CMCC.</p>	Twp.		*	*		

Objective 3.8: Provide and Maintain Outdoor Fitness Gyms to Meet the Recommended Provision Guideline.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.8.1	<p>Recommended provision guideline for outdoor fitness gyms: 1 outdoor fitness gym per 5,000 population</p> <p>Regularly monitor the use of outdoor fitness gyms. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.8.2	<p>Given that there are three outdoor fitness gyms already located in parks and at Harvest Park (Millbrook Christian Assembly Church) within the Millbrook Settlement Area, only one more facility will be required to meet the needs of the target population of 18,000.</p> <p>To create good spatial distribution, it is recommended the fourth outdoor fitness gym be located in Old Millbrook School Park. When this park is redesigned, consider installing the fitness gym on the existing concrete pad.</p>	Twp.				*	

Objective 3.9: Provide and Maintain Picnic Pavilions to Meet the Recommended Provision Guideline.

Actions	Implementation		Timing/Phasing			
	Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
<p>3.9.1 Recommended provision guideline for formal picnic facilities: 1 picnic pavilion per 3,000 population</p> <p>Regularly monitor the use of formal picnic areas. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p> <p>The recommended provision guideline determines that there should be 3.4 formal picnic facilities to support a population of 10,300.</p> <p>Although there are informal places for picnicking and social gatherings throughout the Township, there are only three facilities that are designed to attractively support picnics and small group gatherings:</p> <ol style="list-style-type: none"> 1. Maple Leaf Park (see note below), 2. Station Park gazebo (see note below), and 3. Lion’s (Peterborough County) Park in Millbrook. <p>The Edgewood Park shade structure is too small to support picnics. The Station Street Park gazebo is located in a busy place, the park is very vehicle oriented and it fronts onto King Street which creates a setting that is not very attractive for a picnic. The facility at Maple Leaf Park is insufficient to meets current and future needs.</p>	Twp.		*			*

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.9.2	<p>Based on the recommended provision guideline of one picnic pavilion per 3,000 population, one additional picnic pavilion would be justified as the population reaches 12,000. Two more will be required to meet the target population of 18,000.</p> <p>There are a half dozen opportunities throughout the Township to locate three additional picnic pavilions to support family and other gatherings. Other formal and informal opportunities may become available as new parkland is acquired by the Municipality. See below for candidate locations.</p> <ol style="list-style-type: none"> Old Millbrook School Park: Adjacent to the playground, provide a shade structure/picnic pavilion that is of suitable size to support the outdoor play program and family picnics. Cavan Monaghan Community Centre: Incorporate a small gazebo-style shade structure/picnic pavilion to support existing and proposed new uses in this location. Proposed Downtown Millbrook Park: Provide an attractive pavilion structure that would be the signature picnic and small event space in the Township. Maple Leaf Park: larger, stand-alone facility. Peace Park: Provide a large shade structure suitable for outdoor classes, story telling, picnics and general shade protection. Edgewood Park: Enlarge or replace the existing shade structure to create a picnic shelter that can accommodate at least two picnic tables. 	Twp.					
			EarlyON Child and Family Centre	*			
			Public Library	*			
				*			
					*		
					*		

Objective 3.10: Provide and Maintain Children’s Playgrounds to Meet the Recommended Provision Guideline.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.10.1	<p>Recommended provision guideline for children’s playgrounds: 1 playground per 1,000 population</p> <p>Regularly monitor the use of playgrounds. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.10.2	<p>Maintain and upgrade (as necessary) the playground equipment in all municipal parks to ensure they conform to current CSA safety standards and are accessible.</p> <p>To meet accessibility standards, it is recommended that a 2m wide pathway be provided in existing parks to surrounds the play equipment area and provide access to it from the park entrance and from all other facilities within the park. The pathway should be constructed with either compacted limestone screenings (least accessible) or a paved surface of asphalt or concrete (most accessible). Benches on concrete pads should be placed along the edge of the pathway with enough adjacent rest space to accommodate a wheelchair.</p>	Twp.		*	*	*	*

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.10.3	Wherever this has not been completed, remove the sand surface in playgrounds and replace it with 'Fibar mulch' to a depth suitable for the fall height of the play equipment.	Twp.		*			
3.10.4	<p>As new Neighbourhood parks are acquired, designed and developed, include a children's play structure, unless the park is too small to accommodate one.</p> <p>To meet accessibility standards, it is recommended that a 2m wide pathway be provided in existing parks to surrounds the play equipment area and provide access to it from the park entrance and from all other facilities within the park. The pathway should be constructed with either compacted limestone screenings (least accessible) or a paved surface of asphalt or concrete (most accessible). Benches on concrete pads should be placed along the edge of the pathway with enough adjacent rest space to accommodate a wheelchair.</p>	Twp.		*	*	*	

Objective 3.11: Provide and Maintain Recreation Trails to Meet Growing and Changing Requirements.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.11.1	<p>As new municipal open space lands are acquired, including Natural Heritage Open Space that can support low impact recreation activities, extend the multi-use trail network associated with the Millbrook Valley Trails.</p> <p>For example: extend the Millbrook Valley Trail north from Station Trail at Station Park through Natural Heritage Open Space lands that will be acquired by the Township and into and through the future community that lies west of Towerhill South (CSU) and Towerhill North. That new north-south trail will be routed through parkland to be acquired by the Municipality in both subdivisions. A new, highly visible trailhead and sign should be established at County Road 10 north of the Municipal office and new fire hall.</p> <p>Other linkages and secondary trails can likely be established from the Towerhill South community and the future community to the west (CSU) through future Natural Heritage Open space lands to Station Trail and the Natural Heritage Open Space that contains a branch of the Baxter Creek in the vicinity of Brookside Street and McGuire Drive. That secondary trail would connect to a new, highly visible trailhead and sign at County Road 10 south of Millbrook South Cavan ES.</p>	Twp.	Millbrook Valley Trail Advisory Committee	*	*	*	

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.11.2	Wherever possible, connect parks, schools and other publicly available open spaces to the Millbrook Valley Trail network (core and secondary). Connections can be made via sidewalks, informal pathways, and paved or compacted limestone screening-surfaced pathways.	Twp.	Millbrook Valley Trail Advisory Committee	*	*	*	
3.11.3	As new multi-use trails are constructed and existing trails are upgraded, design and construct them to meet at least the minimum accessibility standards as per the Accessibility for Ontarians with Disabilities Act, 2005. That would include trail width, surfaces and bridge width.	Twp.	Millbrook Valley Trail Advisory Committee	*	*	*	
3.11.4	Maintain and improve existing trails as required.	Twp.	Millbrook Valley Trail Advisory Committee	*	*	*	*
3.11.5	Consider constructing a section of trail that is fully accessible for persons with physical disabilities. To provide the highest possible nature-oriented experience, chose a location with high quality physical attributes.	Twp.	Millbrook Valley Trail Advisory Committee	*			
3.11.6	Continue to implement the recommendations contained in the 2010 Cavan Monaghan Trail Master Plan, particularly the following: <ul style="list-style-type: none"> ▪ All new development/redevelopment (greenfield and brownfield/infill) and road construction proposals should consider the potential for linkages and enhancement of trails and public lands. ▪ Retired road and rail rights-of-way, and other linear corridors should not be sold until it has been clearly demonstrated that they do not/cannot perform a trail network function. If and when they are sold, attempts should be made to maintain a public easement. 	Twp.	Millbrook Valley Trail Advisory Committee				*

	<ul style="list-style-type: none"> Staff and Council should review the required parkland dedication under the Planning act with a view towards determining if, and under what circumstances the provision of trails can be included as part of the parkland dedication. 						
3.11.7	Consider recommendations in the Trail Master Plan for trails in parks (Figure 2), trails on unopened road allowances (Figure 3), and trails on scenic routes (Figure 4).	Twp.	Millbrook Valley Trail Advisory Committee				*
3.11.8	When Municipal and County roads are being rebuilt or newly constructed, provide a sufficiently wide paved shoulder on both sides to support safe on-road cycling.	Twp.	Ptbo. County Millbrook Valley Trail Advisory Committee	*	*	*	*

Objective 3.12: Provide and Maintain Waterplay Facilities to Meet the Recommended Provision Guideline.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.12.1	<p>Recommended provision guideline for a waterplay facility: 1 waterplay facility per 10,000 population</p> <p>Regularly monitor the use of the first waterplay facility. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>Special Note: It is anticipated that the value of waterplay facilities will increase as the average summer temperature rises. The demand for such facilities will be driven by health requirements and recreation demand.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.12.2	In the near term, provide the first waterplay facility at the CMCC.	Twp.	Public Health	*			
3.12.3	As the population nears the target population of 18,000, locate a second waterplay facility at either Old Millbrook School Park or Maple Leaf Park. If demand increases, consider a facility at both locations.	Twp.	Public Health		*	*	

Objective 3.13: Provide and Maintain a Skateboard Facility.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.13.1	<p>Recommended provision guideline for a skateboard facility: 1 skateboard facility per community.</p> <p>A service/provision level of 400 ft² of skateboard facility per 1,000 population is an unofficial standard that is often used by facility planners.</p> <p>Regularly monitor the use of the proposed skateboard facility. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.13.2	<p>Provide a 4,000 ft² skateboard facility to meet current needs. Locate the facility at the Cavan Monaghan Community Centre.</p>	Twp.		*			
3.13.3	<p>As the community grows toward 18,000, expand and upgrade the skateboard facility to 7,000 ft².</p>	Twp.				*	

Objective 3.14: Provide and Maintain Community, Display and Pollinator Gardens.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.14.1	There is no recommended provision guideline for community, display and pollinator gardens. Gardens can be established in any park, with the scale of the garden matching the scale and prominence of the park.	Twp.					*
3.14.2	Maintain the community garden that is located in Old Millbrook School Park, along with the labyrinth.	Twp.					*
3.14.3	Provide at least one display and/or pollinator garden in the proposed downtown park.	Twp.		*			
3.14.4	Small display gardens can be established as part of the main (or only) entrance feature in any park. An example would be the main entrance to Highlands Park on both sides of the pathway leading into the park. At these entrances, the park sign should be integrated into the garden feature.	Twp.		*	*	*	*

Objective 3.15: Provide and Maintain Public Outdoor Performance Venues.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.15.1	<p>Recommended provision guideline for outdoor performance venues: One ‘principal’ public outdoor performance venue per community</p> <p>The term ‘principal’ is used to indicate the ‘main’ stage for outdoor community performances. This does not preclude a small gazebo or picnic pavilion becoming an occasional venue for a performance.</p> <p>This provision guideline is for ‘public’ outdoor performance facilities and recognizes the existence of the 4Th Line Theatre (professional/specialized).</p> <p>Regularly monitor the use of the ‘principal’ public outdoor performance venue. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.15.2	<p>Provide the ‘principal’ outdoor performance venue in the proposed new downtown park. Due to the small size of this new park, the audience apron of the performance venue should be designed and constructed so it can also be used for public gatherings, the farmers market and other community events that require a sizable, level and relatively hard-surfaced area. Facility location, features, design theme and audience capacity will be determined when the park is designed in 2024.</p>	Twp.	<p>Green Hills Arts Council</p> <p>Individual artists</p>	*	*		

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.15.3	Where appropriate, locate small gazebos and similar structures in most parks to provide shade and venues for picnics and small to medium-size gatherings. Where appropriate and desired, these facilities may also be used as venues for small musical performances.	Twp.		*	*	*	

Objective 3.16: Maintain the Public Boat Launch Facility.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.16.1	<p>Recommended provision guideline for boat launch facilities: 1 facility per community</p> <p>Given that there is only one park with frontage on the Otonabee River, there is currently only one opportunity for a boat launch facility within the Township.</p> <p>Regularly monitor the use of the boat launch facility.</p>	Twp.		*			*
3.16.1	<p>The recommendations for upgrade and maintenance of the Whitfield Landing Park and boat launch facility are repeated below (Refer also to Action 2.5.5).</p> <ul style="list-style-type: none"> ▪ Maintain and update as needed the current dock and launch ramp. Consider a cellular containment system to hold the ramp material (gravel) in place to provide a smooth trailer transition into the river. ▪ If demand warrants, consider widening the launch ramp to accommodate the simultaneous launch of two watercraft. 	Twp.		*	*	*	

Objective 3.17: Provide and Maintain Public Arenas to Meet the Recommended Provision Guideline.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.17.1	<p>Recommended provision guideline for public arenas: 1 ice surface per 12,000 population</p> <p>Regularly monitor the use of the ice surface in the CMCC. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.17.2	<p>As the population of the Township approaches the target of 18,000, estimate the amount of unmet local demand for a second ice surface. Also examine what is known about unmet demand for ice surfaces within the region. Research the plans of other communities within the region for any anticipated expansion of their ice surface supply.</p> <p>Determine if there is sufficient local demand for a second ice surface for a population approaching 18,000. If so, this facility should be located in the proposed future Cavan Monaghan active recreation/sports park. Plan the provision of buildings and support services in this park to co-locate the various components wherever possible/feasible.</p> <p>However, there may be another opportunity to meet community needs for ice time via potential regional facilities. In that scenario, Township user groups would schedule ice time within a regional multi-surface arena complex. See Action 3.1.1.</p>	Twp.				*	

Objective 3.18: Provide and Maintain a Multi-Sport Field House.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.18.1	<p>Recommended provision guideline for a field house: 1 facility per community</p> <p>Regularly monitor the use of the field house. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.18.2	<p>Note: Although there are examples (even within the region), a field house with an artificial turf field is not a commonly provided public facility in communities across Canada.</p> <p>If the Township decides that a field house is a facility that should be provided at some time after the Millbrook Arena is decommissioned, there are at least three options to provide such a facility.</p> <p>Option One: The Township provides and maintains a field house which at a minimum would accommodate a 100' x 200' artificial playing surface as well as change rooms and other support components. If larger, this facility could also accommodate indoor tennis, pickleball, volleyball, etc. It would also be ideal for Ultimate Frisbee, sport training, day camps and other turf-based activities throughout the year. This facility would have to be located at the proposed Cavan Monaghan active recreation/sports park. Ideally, the field house would be part of a larger facility that provides washrooms, changerooms, a meeting room, administration space, storage, a picnic facility, an arena, etc. for all groups who are using outdoor facilities (e.g., some combination of</p>	Twp.	Maple Leaf Cavan FC	*	*		

<p>ball diamonds, rectangular fields and possibly other outdoor facilities as recommended in this Strategic Action Plan).</p> <p>Option Two: The Township invests in a joint venture to share a larger regional field house that would contain multiple 100' x 200' artificial turf playing surfaces. Time availability in the facility throughout the year would be based on the capital investment made by each municipality.</p> <p>Option Three: Allow indoor soccer practice in the double gymnasium proposed for the CMCC.</p> <p>Note: Given the number of competing programs, events and other uses of this facility, the hours per week available for the indoor program would be limited.</p>	Twp.	Regional partners	*	*		
	Twp.	Maple Leaf Cavan FC	*	*		

Objective 3.19: Provide and Maintain Additional Public Multipurpose/Program Rooms to Meet the Recommended Provision Guideline.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.19.1	<p>Recommended provision guideline for multipurpose rooms: 1 multipurpose/program room per 2,000 population</p> <p>Regularly monitor the use of current and future multipurpose rooms. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.19.2	<p>Based on the recommended provision guideline, and the current use pattern, the present supply of public facilities is adequate.</p> <p>However, 5 additional facilities will be required to meet the needs of the target population of 18,000. Some of those spaces should be provided as a component of the proposed expansion of the Cavan Monaghan Community Centre.</p> <p>Several multipurpose/program rooms should also be included with the proposed field house and/or second ice pad (ideally co-located in the proposed active recreation/sports park).</p>	Twp.			*	*	

Objective 3.20: Provide and Maintain an Older Adult Social/Recreation/Wellness Space.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.20.1	<p>Recommended provision guideline for older adult social/recreation/wellness centres: 1 facility per community</p> <p>Regularly monitor the use of this facility. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.20.2	<p>In the near term, explore interest in establishing a volunteer-based older adult club or association. This would not be a formal advisory committee of Council, although that could be one of its functions. The main purpose would be to research, organize and promote programming and events of specific interest to older adults and their range of abilities.</p>	Twp.		*			

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.20.3	<p>Although older adults will utilize all components of the CMCC for a wide variety of programs and events, especially if the facility is expanded to include additional types of facilities (based on individual interests and abilities), a dedicated quiet, social 'home base' is typically required - especially for older seniors who are more interested in social interaction, wellness-related services and programs, as well as a meal program.</p> <p>Therefore, it is recommended that a suitable dedicated older adult space be integrated into the proposed expansion of the CMCC. This is not an immediate need and should not be initiated until an older adult club or association is well established in the community (see Action 3.19.2 and Chapter Six, Section 6.5.2). When detailed planning takes place, that group and a sample of older adults from across the Township should be engaged in determining the size and nature of the older adult component of the CMCC.</p> <p>This location is recommended because older adult programming will be enriched via a location within an expanded and more diverse CMCC.</p>	Twp.	Older Adult Club or Association		*	*	

Objective 3.21: Provide and Maintain a Suitable Venue(s) for the Creative Arts.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.21.1	<p>Recommended provision guideline for a creative arts centre: 1 facility per community</p> <p>Regularly monitor the use of the creative arts centre. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.21.2	<p>Work with the newly formed Green Hills Arts Council and individual artists to promote and provide an increasingly wide variety ‘introductory’ and ‘intermediate’ level visual art programming and events.</p>	Twp.	<p>Green Hills Arts Council</p> <p>Individual artists</p>	*			*
3.21.3	<p>As current contracts for space expire, investigate the feasibility of transforming all but the Public Library and the Early ON Child and Family Centre at the Old Millbrook School building into a visual arts centre. Enlist the Green Hills Arts Council to assist with the transformation.</p> <p>Alternatively, consider an addition to the existing building that would accommodate a purpose-built creative arts centre and expanded library.</p>	Twp.	Green Hills Arts Council	*	*	*	

Objective 3.22: Provide and Maintain a Fitness/Wellness Centre.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.22.1	<p>Recommended provision guideline for a fitness/wellness centre: 1 facility per community</p> <p>Regularly monitor the use of the fitness/wellness centre. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.22.2	<p>Provide a fitness/wellness facility as an addition to the Cavan Monaghan Community Centre. The size and features are to be determined in 2024 when the conceptual plan is developed for the proposed expansion of the CMCC building.</p>	Twp.	Specialists		*	*	

Objective 3.23: Maintain the Indoor Walking Track at the CMCC.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.23.1	<p>Recommended provision guideline for an indoor walking track: 1 facility per community</p> <p>Regularly monitor the use of the indoor walking track at the CMCC. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.23.2	<p>Maintain and program the walking track at the CMCC to optimize its use. When the proposed fitness/wellness facility is provided, integrate the walking track into fitness/wellness centre programming.</p>	Twp.	Specialists		*		*

Objective 3.24: Provide and Maintain a Gymnatorium.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.24.1	<p>Recommended provision guideline for a gymnatorium: 1 facility per community</p> <p>Regularly monitor the use of the gymnatorium. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.24.2	<p>Provide a gymnatorium as an addition to the Cavan Monaghan Community Centre. A gymnatorium is a single or double gymnasium that is enhanced to also support non-sport community and arts events, and trade shows. Acoustics, lighting and sound would be enhanced to support the non-sport activities. A sport floor would be essential.</p> <p>The size and features are to be determined in 2024 when the conceptual plan is developed for the proposed expansion of the CMCC building.</p>	Twp.			*	*	

Objective 3.25: Provide and Maintain a Public Leash-Free Dog Facility.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
3.25.1	<p>Recommended provision guideline for a public leash-free dog facility: 1 facility per community</p> <p>Regularly monitor the use of the public leash-free dog facility. Adjust the recommended provision guideline to meet any changes in demand and facility requirements.</p> <p>If the provision guideline needs to be adjusted, recalculate future facility requirements and timing.</p>	Twp.		*			*
3.25.2	<p>The only leash-free dog facility located in the Township is the commercial facility at the Peterborough West Animal Hospital. Community members from Peterborough and area are encouraged to utilize this facility.</p> <p>However, since a <u>public</u> leash-free dog facility does not exist in the Township, the recommended facility provision guideline reveals a shortfall of one facility to meet current and future requirements.</p> <p>It is recommended that a leash-free dog facility be considered for Maple Leaf Park. When the conceptual plan is prepared for this park, a suitable size and location can be determined.</p>	Twp.	Specialists	*	*		

Strategic Direction Four: Provide Quality Recreation, Sport and Culture Programming and Community Events (including Tournaments).

Objective 4.1: As Demand Warrants, Gradually Increase the Quantity and Diversity of Recreation, Sport and Culture Programming.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
4.1.1	Continue to work with individuals, community-based groups and commercial service providers to utilize all of the facilities in municipal parks and buildings to offer recreation, sport and culture programming that is in demand.	Twp.	Other providers	*			*
4.1.2	Gradually increase the number of programs and events that the Municipality directly provides, especially where demand is high and no other provider has come forward to offer the program – or where the quality and/or cost of a program provided by a third party does not meet the standards and/or expectations of the Municipality and/or the community.	Twp.	Other providers	*			*
4.1.3	Through direct and indirect means, gradually provide more programming for children, adults and older adults.	Twp.	Other providers	*			*
4.1.4	Through direct and indirect means, gradually provide more programming for the creative and the performing arts.	Twp.	Other providers	*			*

Objective 4.2: As Facilities Improve, Encourage More Sport Tournaments.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
4.2.1	As sports facilities improve, the ability to support winter and summer tournaments in the Township will increase. These tournaments will be organized by local sports groups and by groups from other communities who will rent Township facilities to host their tournaments. In both cases, there will be a positive economic impact on the Township from visiting teams.	Twp.	Other providers	*			*

Objective 4.3: As Facilities and Organization of the Arts Improve, Expand Cultural Tourism.

Actions		Implementation		Timing/Phasing			
		Lead	Support	2024-2030	2031-2035	18,000 Pop.	Ongoing
4.3.1	<p>As the ‘arts and culture’ role of the Municipality becomes more prominent, the local and regional arts community becomes more active, and public and other facilities improve, the opportunity for cultural tourism to flourish will increase.</p> <p>Types of programs and events that could be provided include:</p> <ul style="list-style-type: none"> ▪ art in the park, ▪ a music series in the proposed downtown park and gymnasium, ▪ studio tours, ▪ art shows at the CMCC and the Old Millbrook School, ▪ a partnership with 4th Line Theatre to offer smaller-scale productions in downtown Millbrook, etc. <p>Via a partnership between the Municipality and the local arts community, it should be possible to undertake some of these initiatives within the first five years of the implementation of Vision 2035.</p>	Twp.	<p>Green Hills Arts Council</p> <p>4th Line Theatre</p> <p>Other providers</p>	*			*

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Chapter Six: Supplemental Recommendations

6.1 Introduction

Chapter Six contains a number of documents/recommendations that are supplemental to the **Strategic Action Plan**. By their nature, their structure does not fit within the strategic plan structure. The supplemental recommendations comprise the following:

- Park/Open Space Classification System and Associated Planning Guidelines,
- Planning and Provision Guidelines for Culture and Recreation Facilities,
- Strategic Direction for the Future of the Millbrook Arena and Associated Lands,
- Strategic Direction for the Future of the Cavan Monaghan Community Centre and Associated Lands,
- Strategic Direction for Maple Leaf Park,
- Funding and Financing Strategy, and
- First Steps Toward Implementation.

6.2 Park/Open Space Classification System and Associated Planning Guidelines

The planning guidelines are intended to guide the implementation of Vision 2035 and inform parkland/open space policy in the new Township Official Plan. **Figure 6-1** contains the Park/Open Space Classification System and Associated Planning Guidelines. Also included are recommendations re: conditions of parkland conveyance and conditions of acceptance of payment-in-lieu of parkland dedication.

It is recommended that Township Council endorse the Park/Open Space Classification System and Associated Planning Guidelines, plus the conditions of parkland conveyance and conditions of acceptance of payment-in-lieu of parkland dedication.

6.3 Provision Guidelines for Culture and Recreation Facilities

Provision Guidelines are recommended for all types of culture and recreation facilities. These guidelines have helped to assess the current adequacy of each type of facility. The degree of adequacy or inadequacy of current supply helped to shape the recommended provision guidelines. They were also used to project future facility needs in response to a growing and changing population. If demand changes substantially over time, some of the provision guidelines will have to be adjusted. Refer to **Figure 6-2**.

It is recommended that Township Council endorse the Provision Guidelines for Culture and Recreation Facilities.



Cedar Valley Park

Figure 6-1:

Park/Open Space Classification System and Associated Planning Guidelines, Township of Cavan Monaghan, 2023

Park/Open Space Classification	Preferred Size	Functional Requirements and Characteristics (Planning Guidelines)
<p>Community Parks</p> <p>Current Level of Provision (based on an estimated pop. of 15,000, incl. the three new residential communities that are not yet populated):</p> <p>4.31 ha/10.65 ac per 1,000 population</p> <p>Recommended Provision Guideline: 4.0 ha/9.88 ac per 1,000 population</p> <p>Note: The provision guideline for Community Parkland is higher than typical because of the large amount of natural heritage land within the township, some of which is incorporated into Community-level parkland.</p> <p>Also note that Nature Heritage Open Space is a separate category of public parkland (see below).</p>	<p>This level of park can be any size but are typically much larger than Neighbourhood parks and are often large enough to accommodate multiple sports fields.</p>	<ul style="list-style-type: none"> ▪ The scale, size and appeal of the parks and other open spaces, as well as associated facilities in this category are intended to attract most users from across the Township and beyond. ▪ This category includes municipal parks, secondary schools, post-secondary education lands, conservation areas that can support low-impact public use, provincial open space lands (e.g., MNRF), golf courses and other similar types of open space. ▪ A secondary school or elementary school (or both) are sometimes located adjacent to a Community park – and ideally, the sites are developed into a joint open space campus where facilities are shared between the school and the community. ▪ Generally, this category of park/open space should incorporate outdoor and indoor facilities that are classified as ‘intermediate’ and higher in scale and quality such as: lit Level A ball diamonds, multiple lit tennis courts, lit Level A soccer pitches, a community centre, a picnic pavilion, a major waterplay facility, a service building (washrooms, change facilities, food concession), a display garden(s), a community garden, an outdoor fitness gym, a disc golf facility, pathways/trails, parking, and other suitable facilities and amenities. ▪ Typically, this level of park attracts day-use activities. ▪ Community parks should be predominantly table land. However, all or part of a Community park can comprise natural heritage features (e.g., a wooded area, a watercourse, a wetland, a stormwater management pond, valley lands, and steeply sloped lands that are suitable for activities and facilities like trails, nature appreciation/study, geocaching, tobogganing, as well as to provide visual and topographic relief. ▪ Generally, Community parks/open spaces should be large sites, but can include smaller sites such as a civic square, a small downtown park, a cenotaph, a small waterfront site. ▪ Whenever possible, Community parks/open spaces should be linked to the municipal and regional trail/greenway system. ▪ If not an historic-based entity, the location should be influenced by criteria such as good roads, high visibility and adequate spatial distribution. ▪ Sports facilities within the park (especially lit facilities) should not directly abut residences. ▪ Ensure that playgrounds, sitting/viewing areas and picnic areas are well shaded. ▪ Development or rejuvenation of a Community park should be supported by a park plan.

<p>Neighbourhood Parks</p> <p>Current Level of Provision (based on an estimated pop. of 15,000, incl. the three new residential communities that are not yet populated):</p> <p>0.41 ha/1.02 ac per 1,000 population</p> <p>Note: The above ratio excludes undeveloped and possibly redundant Brewda Park (1.45 ha/3.59 ac).</p> <p>Recommended Provision Guideline: 0.5 ha/1.24 ac per 1,000 population</p>	<p>0.25 – 1.25 ha. 0.62 – 3.1 ac.</p>	<ul style="list-style-type: none"> ▪ Neighbourhood parks are intended to serve the close-to-home recreation needs of a neighbourhood or part of a neighbourhood. ▪ The scale, size and appeal of the parks and facilities within this category are intended to attract <i>mostly</i> nearby residences (within five-minute walking distance or 600-800 metres), predominantly for less organized, passive leisure activities. Children should not have to cross a busy street to access a Neighbourhood park. ▪ Associated open spaces include elementary schools, church sites with turfed and usable open space, and associated open space linkages and walkways. ▪ Neighbourhood parks should incorporate outdoor facilities that suit the scale and role of Neighbourhood parks (e.g., a play structure, a drinking fountain, internal pathways, a sitting area/gazebo/sun shelter, a basketball court/multi-sport pad, a natural skating rink, a community or sensory garden, sitting areas, etc.). ▪ For the type and scale of recommended facilities and uses, parking is typically not required in a Neighbourhood park. ▪ Ensure that playgrounds, sitting/viewing areas and picnic areas are well shaded. ▪ Whenever possible, Neighbourhood parks should be linked into the trail system. ▪ Ensure that a <i>minimum</i> of 25% of the perimeter of the site of the park fronts onto a street, and most of the park is visible from the street(s). ▪ Unless required for safety, the street perimeter should not be fenced, although some form of border treatment could be incorporated into the street edge to define the park boundary. ▪ Most or all of the park should be table land quality. However, a Neighbourhood park can contain treed areas and other natural heritage features like a watercourse. ▪ Development of Neighbourhood parks should be supported by a park plan.
<p>Natural Heritage Open Space</p> <p>Current Level of Provision (based on an estimated pop. of 15,000, incl. the three new residential communities that are not yet populated):</p> <p>4.35 ha/10.75 ac per 1,000 population</p> <p>No recommended provision guideline.</p>	<p>No size parameters</p>	<ol style="list-style-type: none"> 1. Since the Township has acquired a good deal of this type of land through the development process and additional natural heritage lands will be acquired via future developments, a separate category of public parkland/open space has been created. 2. Although they are a separate category of public open space, natural heritage lands can be found in some Community-level parkland (e.g., Peace Park, Maple Leaf Park). When the lands adjacent to Old Millbrook School Park are designated as ‘parkland’ and added to that park, it will also contain a large amount of natural heritage features. 3. A good deal of the lands that are classified as Natural Heritage are entirely or mostly sensitive/fragile in nature – and will only be able to support scientific research. However, some of these lands are not quite as sensitive and will be able to accommodate low impact uses such as walking, hiking, bicycling and cross-country skiing on trails; geocaching; picnicking in designated areas; and nature appreciation.

Conditions of Parkland Conveyance

Since most parkland dedication will be allocated to Neighbourhood parkland, properties that align with the recommended planning guidelines in **Figure 6-1** should inform conditions of parkland conveyance.

- **Size:** 0.25 to 1.25 ha. Larger properties are appropriate but if a larger property is accepted, there may not be sufficient land remaining in the dedication allotment to service other parts of the development area.
- **Quality of the property:** For Neighbourhood parkland, all or most of the site should be relatively level and well drained - suitable for development into a Neighbourhood park. A small portion of the site can be treed and can contain a watercourse. However, the area containing the watercourse will not be tableland (developable) and therefore, should not be included as part of the parkland dedication.
- **Shape of the Property:** Although there are no set parameters for shape, the property should be configured such that it can be developed into an acceptable Neighbourhood park. For example, a property that is very narrow will be impossible to properly develop into an acceptable Neighbourhood park.
- **Frontage:** Ensure that a minimum of 25% of the perimeter of the site of the park fronts onto a street, and most of the park is visible from the street(s). A narrow point of access to a Neighbourhood park makes it difficult to notice the park, increases the security risk (lack of visibility of activities in the park), and does not sufficiently contribute to visual relief and openness that parks can provide.
- **Location:** Neighborhood parks are intended to serve *mostly* nearby residences (within five-minute walking distance or 600-800 metres). Children should not have to

cross a busy street to access a Neighbourhood park.

- **Other considerations:** The property should be prepared to the satisfaction of the Municipality (grading, seeding and a park development plan that aligns with what is recommended for Neighborhood parks in Figure 6-1 above (predominantly for less organized, passive leisure activities). Neighbourhood parks should incorporate outdoor facilities that suit the scale and role of Neighbourhood parks (e.g., a play structure, a drinking fountain, internal pathways, a sitting area/gazebo/sun shelter, a basketball court/multi-sport pad, a natural skating rink, a community or sensory garden, sitting areas, etc.).

Conditions of Acceptance of Payment-in-lieu of Parkland Dedication

The Township of Cavan Monaghan Official Plan includes the following conditions when payment-in-lieu of parkland dedication should be accepted.

- i) The use of alternative parkland dedication policy consumes more than 10% of the site area thereby rendering the site undevelopable,
- ii) The amount of land for parkland dedication does not result in a sufficient area for a park development (less than 0.25 ha for a Neighbourhood park), or
- iii) The dedication of land is not deemed necessary (because there is sufficient parkland in the vicinity of the development).

It is recommended that the following additional condition be considered.

If there is no land within the development area that is acceptable for Neighbourhood or Community parkland.

Figure 6-2: Provision Guidelines for Culture and Recreation Facilities, Township of Cavan Monaghan, 2023

Facility Category and Supply (parks, schools & other providers)	Current Level of Provision (based on est. 2023 pop. of 10,300)	Recommended Provision Guideline	Current (2023) Shortfall (-) or Surplus (+)	ADDITIONAL Facilities Required for Projected Population of 18,000
Rectangular Fields/Soccer Pitches 3 Level A fields (parks & sec. school) ¹ 5 Level B fields (schools – poor quality) 6 Level C fields (schools – poor quality)	1 Level A field:3,433 pop. 1 Level B field:2,060 pop. 1 Level C field:1,717 pop.	1 Level A field:4,000 pop. 1 Level B field:2,000 pop. 1 Level C field:2,000 pop.	+ 0.35 Level A fields ¹ Adequate number, poor quality + 1 Level C fields	1.5 Level A fields (parks & schools) 4 Level C fields (parks & schools) 3 Level C fields (parks & schools) (upgrade existing Level B & C fields)
Ball Diamonds 0 Level diamonds A 2 Level B diamonds (park) 2 Level C diamond (schools – poor quality)	No Level A diamonds 1 Level B diamond: 5,150 pop. 1 Level C diamond:5,150 pop.	1 Level A diamond: 10,000 pop. 1 Level B diamond: 10,000 pop. 1 Level C diamond: 5,000 pop.	- 1 Level A diamond + 1 Level B diamond Adequate number (poor quality)	1.8 Level A diamonds (parks) Relocate 2 Level B diamonds (parks) 1.6 Level C diamonds (parks & schools) (upgrade existing)
Waterplay Facilities No waterplay facilities	No waterplay facilities	1 waterplay facility:10,000 pop.	- 1 waterplay facility	2 waterplay facilities
Arenas 1 ice surface (CMCC)	1 ice surface:10,300 pop.	1 ice surface:12,000 pop.	Adequate supply	0.5 ice surfaces
Tennis Courts 2 lit (secondary school) (poor quality)	1 lit tennis court:5,150 pop.	1 lit tennis court:5,000 pop.	Upgrade existing	1.6 lit tennis courts (parks & schools)
Pickleball Courts (outdoor) No outdoor courts	No outdoor pickleball courts	1 lit pickleball court:3,000 pop.	+ 3.4 lit pickleball courts	6 lit pickleball courts (park)
Basketball/Multi-Sport Courts 3 full courts (parks & schools) 1 half court (park)	1 full basketball court:2,943 pop. (assumes 3.5 existing courts)	1 full basketball court:3,000 pop.	Adequate number	3 basketball courts (parks & schools)
Beach Volleyball Courts No beach volleyball courts	No beach volleyball courts	1 beach volleyball court:5,000 pop.	- 2 Beach volleyball cts.	3-4 beach volleyball courts (park)
Skateboard Facilities No skateboard facility	No skateboard facility	1 skateboard facility per community	-1 skateboard facility	1 skateboard facility (park)
Outdoor Fitness Gyms 3 (parks & church)	1 outdoor fitness gym:3,433 pop.	1 outdoor fitness gym:5,000 pop.	+ 1 Outdoor fitness gym	0.6 outdoor fitness gyms
Playgrounds 9 (parks, schools, church)	1 playground:1,144 pop.	1 playground:1,000 pop.	Adequate number	9 playgrounds (parks, schools, other)
Picnic Pavilions 3 Picnic Pavilions	1 picnic pavilion:3,433 pop.	1 picnic pavilion:3,000 pop.	+ 0.5 picnic pavilion	3 picnic pavilions
Boat Launch Facilities 1 boat launch (park)	1 boat launch:10,300 pop.	1 boat launch per community	Adequate number	No additional facilities

Figure 6-2: Provision Guidelines for Culture and Recreation Facilities, Township of Cavan Monaghan, 2023 (continued)

Facility Category and Supply (parks, schools & other providers)	Current Level of Provision (based on est. 2023 pop. of 10,300)	Recommended Provision Guideline	Current (2023) Shortfall (-) or Surplus (+)	ADDITIONAL Facilities Required for Projected Population of 18,000
Outdoor Performance Venues No public outdoor performance venues	No public facilities	1 principal public venue per community	- 1 public venue	1 public outdoor performance venue
Indoor Performance Venues No public indoor performance venues	No public facilities	1 public venue per community	- 1 public venue	1 public indoor performance venue
Creative Art Venues No public creative art venues	No public creative art venues	1 public venue per community	- 1 public venue	public creative art venue
Gymnasias No gymnasias	No gymnasium	1 gymnasium per community	- 1 gymnasium	1 gymnasium
Fitness Centres No fitness centre	No fitness centre	1 fitness centre per community	- 1 fitness centre	1 fitness centre
Multipurpose/Program Rooms 4 public & 5 commercial & non-profit facilities	1 public facility:2,575 pop.	1 public multipurpose/program room:2,000 pop.	Adequate number	5 public multipurpose/program rooms
Indoor Walking Tracks 1 indoor walking track (CMCC)	1 indoor walking track:10,300 pop.	1 indoor walking track per community	Adequate number	No additional facilities
Older Adult Centres No older adult centres	No older adult centres	1 older adult centre per community	- 1 older adult centre	1 older adult centre
Field Houses 1 temporary facility (Millbrook Arena floor)	1 temporary facility:10,300 pop.	1 field house per community	Adequate temporary supply	1 adequate field house
Outdoor Running Tracks 1 outdoor running track (school – moderate quality)	1 outdoor running track:10,300 pop.	1 outdoor running track per community	Adequate number	No additional facilities
Leash-free Dog Facility 1 commercial facility No public facilities	1 commercial facility:10,300 pop. No public facilities	1 public leash-free dog facility per community	- 1 public facility	1 public leash-free dog facility

Notes

- Rectangular Fields:** For Vision 2035, the main soccer/football field at Crestwood SS is considered a Level A facility because of its full size. However, the City of Peterborough rates this field as a full-size Level B facility due to its less-than-ideal playing condition. Peterborough categorizes their rectangular fields into five levels, based on size, lighting, type of turf and quality. Three of those levels are various qualities of full-size fields, including artificial turf facilities. For Vision 2035 (Cavan Monaghan), fields are categorized into three levels, based on size (A, B and C). The Crestwood facilities and adjacent fields north of James Strath School are regularly used by the Maple Leaf Cavan FC. For Vision 2035, the main Crestwood SS field is counted as one of the three Level A fields located within the Township, even though it is a poorer-quality facility. In a 2023 Peterborough study of rectangular fields, the main field at Crestwood SS and the four small fields north of James Strath ES are recommended for rejuvenation. **The recommended provision guideline of one full-size field per 4,000 population translates into a slight surplus of Level A fields which does not reflect the current demand for fields generated by a highly successful soccer club that attracts players from the Township and surrounding communities.**

6.4 Strategic Direction for the Future of the Millbrook Arena and Associated Lands

As noted earlier, as part of this Plan and through separate studies, an in-depth assessment of the structural, electrical, mechanical aspects of the building, a designated substance survey, and a functionality assessment of the 50+ year old Millbrook Arena were completed between 2019 and 2023. The results of these studies are included in the Background Report and under separate cover.

Considerable community engagement associated with this Plan (household survey, user group surveys, a Community Forum and second survey, and follow-up discussions with user groups) concluded that the preferred option of about 75% of those engaged in the process favoured decommissioning the arena and replacing it with a downtown park or square. An important caveat for some Forum delegates was that an appropriate opportunity to accommodate existing uses of the arena be found before the building is decommissioned.

On June 5, 2023, Cavan Monaghan Council passed the following resolution:

- That staff be directed to commence planning for the creation of a community park on the Millbrook Arena lands; and
- That the existing users of the Millbrook Arena be permitted to use the existing facility in its current state until the final plans for the community park are approved by Council or that the facility becomes a health and safety concern; and
- That Council's direction be carried forward in Phase Two of the Parks and Recreation Plan – Vision 2035.

Within **Strategic Direction #3 (Provide Quality Recreation and Culture Facilities to Meet Growing and Changing Needs)**, various facilities were identified as potential candidates for this park. That emerging list of facilities and features will need to be fully evaluated in Phase Three of this planning process. It was decided not to list candidate facilities here so as not to overly influence the upcoming community engagement and planning process in 2024.

The 2013 Millbrook Revitalization Study also provided some general directions regarding the nature of this park. See **Figure 6-3** on the next page for the broad concept for this park that was contained in that study. The graphic illustrates the potential lands that may be associated with the park. The design concept was left intentionally vague to allow for further demand assessment and community engagement regarding its purpose and composition.

An analysis of the site and adjacent lands will identify the exact extent of the park. Opportunities and constraints will have to be researched before deciding about potential facilities and designing the park.

The Vision: Create a signature downtown park or civic square that will become a focal point and gathering place for the community. The park will be largely passive in nature and will connect to the downtown commercial area, Old Millbrook School Park and Public Library, the Millbrook Conservation Area, and the Millbrook Valley Trail network - to create an inspiring open space campus within the centre of Millbrook.



Figure 6-3: From the Millbrook Downtown and Streetscape Revitalization, 2013

6.5 Strategic Direction for the Cavan Monaghan Community Centre and Associated Lands

Introduction

The community engagement, demand research and preliminary site and facility analysis recommends the following strategic direction for the Cavan Monaghan Community Centre (CMCC) and associated undeveloped lands.

This current list of indoor and outdoor facilities and features will be further detailed as part of proposed Phase Three of this planning project (2024).

The main deliverable will include at least the following:

- Further detail for the indoor facilities;
- A high-level block layout for an enlarged community centre;
- A conceptual site plan for the remaining portion of the property; and
- An implementation strategy.

Potential Building Expansion

As demand warrants over the next ten years and beyond, expand the Cavan Monaghan Community Centre. It may be necessary to phase the expansion - with one or the other main components proceeding first. Regardless of which anchor facility is provided first, changerooms and some of the other common elements will be required in Phase One.

At this time, the following components are the most likely candidates to expand the CMCC. Although a second ice

surface was indicated in the initial design of the CMCC and there will likely be sufficient demand for a second ice surface before the target population of 18,000 is reached, current community opinion suggests that other types of facilities will provide more value to a wider segment of the community in the medium term. Therefore, other facilities have been given priority over a second ice pad at the CMCC. Opportunities for additional indoor ice may become available within the region, likely through a partnership(s), or a second ice pad could be provided at the proposed active recreation/sports park. See **Action 3.1.1**.

Candidate Indoor Facility Components to be Considered:

- **Single or double gymnasium** – modified to also be a public assembly space and occasional performance facility. To support the performance facility, improved acoustics, a portable stage, enhanced/specialized lighting and sound, a ‘green room’, and other features to be determined will be required).
- **Fitness/wellness centre** (size and features TBD in Phase Three)
- **Changerooms** to support the proposed gymnasium, the strength and conditioning gym and the aerobics studio.
- **Flexible, multi-purpose spaces** to support culture and recreation activities and meetings (contiguous/dividable – number and size TBD in Phase Three).
- **A dedicated space for older adults** (who will also use all of the other components at the CMCC). See **Action 3.20.3**.
- **Additional public space** (e.g., washrooms, food services, expanded foyer)
- **Additional office space** (administration, program and maintenance staff).

- **Storage** to support the original building and all new facilities and their uses.
- **Additional parking** will be required to support existing and new uses.

Candidate Outdoor Facilities

Since the CMCC is a signature facility serving the entire Township, the outdoor facilities located there should be scaled accordingly and have community-wide appeal. However, because the developing residential community to the west (Towerhill North) does not have any neighbourhood parkland within the southern half of the development area, the outdoor area associated with the community centre building will have to double as a Neighbourhood and a Community park. Therefore, facilities typical of a Neighbourhood park and a Community park should be included.

Fortunately, some of the facilities typical of a Neighbourhood park have already been provided as part of the community centre development to date:

- playground,
- small-scale outdoor fitness gym,
- sitting areas, and
- display garden.

It is recommended that the remaining area north, northwest and west of the proposed expanded community centre building be designated for additional recreation facilities to meet both neighbourhood and Township-wide needs.

To create sufficient level land in the area directly south of the water tower, it is recommended that a retaining wall be

installed along the northwestern edge/corner of the park property.

The following types of **additional** facilities should be located in this area (if the eventual building footprint permits):

- a signature waterplay facility
- 4 pickleball courts with room set aside to expand to 6 and then 8 if demand warrants
- a basketball/multi-sport court
- a tennis court (with room to add another later and light)
- 4 beach volleyball courts (phased 2+2)
- A 4,000 sf² skateboard facility, with room allocated to expand to 7,000 ft² in future
- a gazebo/shade structure/picnic pavilion
- pathways that connect the facilities (limestone screenings or paved)
- benches located strategically along the pathways, each bench with a shade tree
- other shade trees

Pedestrian Link - It will be essential to provide a lit, hard-surface pedestrian/bicycle link from all of the facilities at the CMCC to the residential community of approximately 2,000 people that is planned for the area directly adjacent to the community centre on the west (Towerhill North).

Based on the above and any other input, prepare a conceptual plan for the remaining lands at the Cavan Monaghan Community Centre and the proposed expansion of the community centre.

This task is proposed for 2024 as Phase Three of this planning process.

See **Figure 6-4** for a graphic illustration of the initial thinking about the possible configuration of additional outdoor facilities at the CMCC and an approximate footprint for building expansion. The proposed 2024 planning and design process will determine the size and orientation of the indoor facilities which will adjust the generalized building footprint that is shown in **Figure 6-6**. The eventual building footprint and required parking to support existing and new uses will determine the area remaining for outdoor facilities. That may impact what is proposed for outdoor facilities.



Photos of the Cavan Monaghan Community Centre and Associated Undeveloped Lands

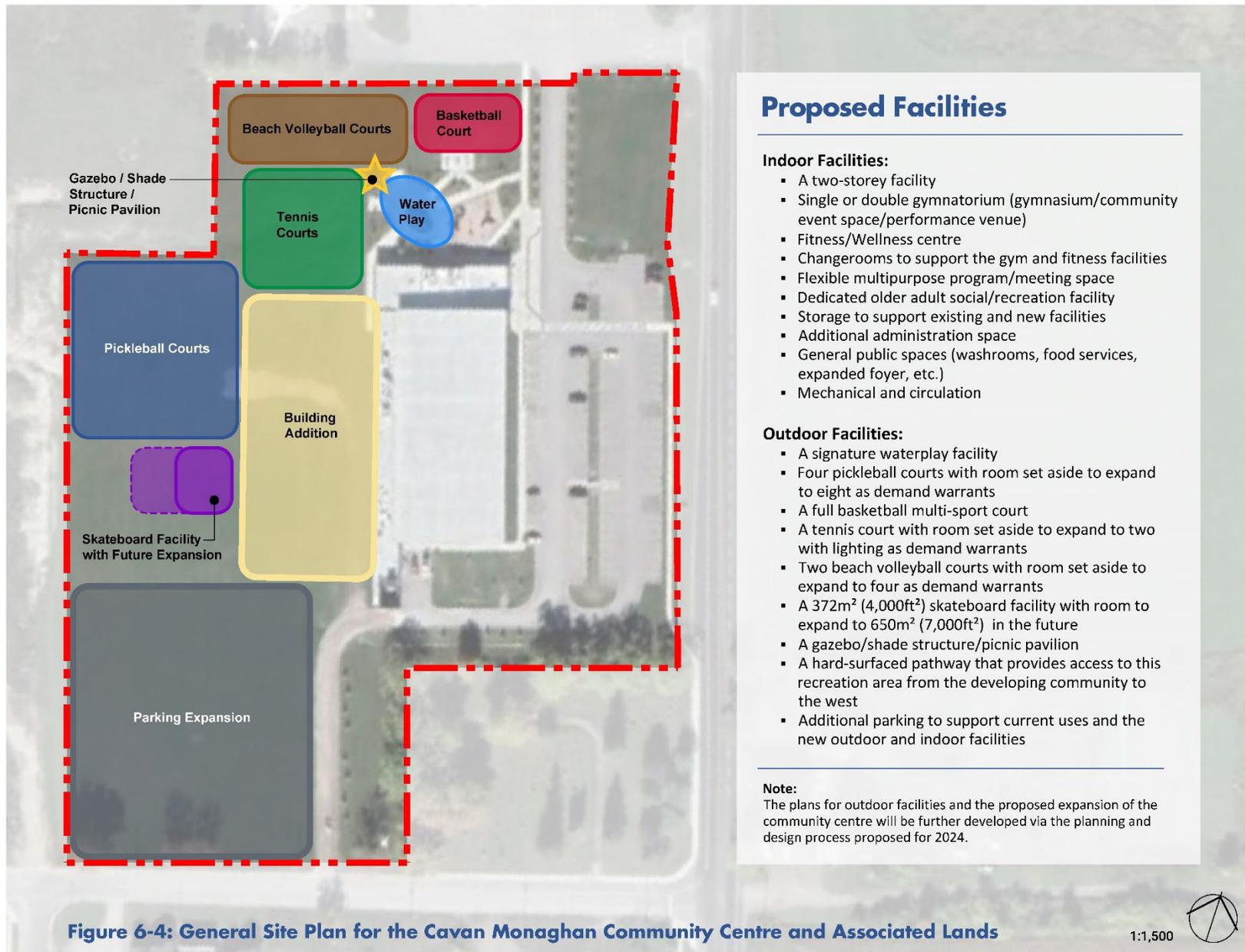


Figure 6-4: General Site Plan for the Cavan Monaghan Community Centre and Associated Lands

6.6 Strategic Direction for Maple Leaf Park

Action 2.5.1 recommended that when the ball diamonds are rebuilt at the proposed new sports park, a full-size, adult lit soccer pitch be constructed in place of the ball diamonds. It was also recommended that support facilities be improved to include bleachers, change rooms, more washrooms, a food service, a second playground, and improved on-site pedestrian circulation.

In **Action 2.5.1**, the following additional facilities were recommended to further enhance this park:

- a waterplay facility,
- a picnic pavilion, and
- a leash-free dog park.

To ensure that the additional soccer pitch would fit in place of the ball diamonds, a high-level facility-fit exercise was completed (see **Figure 6-5**).

This should not be considered a conceptual design for Maple Leaf Park, but rather to illustrate how a third soccer pitch could be located in the park.

It was also recommended that a conceptual plan be prepared to guide the rejuvenation of Maple Leaf Park, and that improvements be undertaken as demand warrants and resources become available.



Figure 6-5: Facility-Fit Exercise Illustrating a Full-Size Lit Adult Soccer Pitch Replacing the Ball Diamonds and a Proposed Second Playground

6.7 Funding and Financing Strategy

Principal Sources of Funding and Financing

Although many of the recommendations in the Strategic Plan will incur capital cost, a good many will not. Some initiatives will incur ongoing operating costs (e.g., staff salaries and benefits, facility maintenance and repairs, and other operating costs).

The following are the main categories of funding and financing for the recommended capital projects in the Strategic Plan.

1. Grants (e.g., Ontario Trillium Foundation; Jays Foundation; other foundations that support culture, recreation, sports, etc.; accessibility grants; close to 150 arts and culture grants; occasional federal/provincial grant programs; etc.). Federal/provincial grant programs are irregular, vary by focus, and usually encourage project partnerships and climate change mitigation features.
2. Development charges and cash-in-lieu of parkland associated with residential, commercial and industrial development and redevelopment projects.
3. Park Reserve Account (can be funded through an annual tax-based contribution, and by cash-in-lieu of parkland contributions).
4. Sponsorship and naming rights (entire buildings, individual components of buildings, entire parks, individual outdoor facilities).

5. Community fundraising for specific capital projects that have wide community appeal.
6. Planned Giving - the act of leaving a charitable gift to a chosen party, cause or organization as a way to honour the donor's life. It usually comes in the form of money, assets or property, and may or may not be included in the person's Will.
7. Municipal tax levy. Investments in capital and other initiatives are decided annually, based on plans like Vision 2035.
8. Municipal debentures.
9. Proceeds from the sale of surplus/redundant parkland.

6.8 First Steps Toward Implementation

The following are the top twenty activities to initiate implementation of Vision 2035 – Parks and Recreation Strategic Plan. These initiatives focus on the early years of the Plan – and include policies, priority administration/service delivery initiatives, priority park and facility planning and design initiatives, priority park and facility development, and enhanced programming and events.

1. **Township Council to Approve:** the Belief Statement, Guiding Principles, Strategic Priorities (by title, Facility Provision Guidelines, and the Park/Open Space Classification System and Associated Planning Guidelines

- and **receive the Strategic Plan** to help inform future planning and decision making.
- 2. Plan and design the proposed **downtown park**.
- 3. Complete the planning and design of the **Cavan Monaghan Community Centre** and associated lands.
- 4. Increase the **community development role** of the Municipality in support of established and new groups. Hire a Volunteer Development Coordinator to support this task.
- 5. Complete the upgrade of **playgrounds** to meet safety standards.
- 6. Establish a **Committee of Council** to represent culture, recreation and parks.
- 7. Continue to explore opportunities for **shared regional culture and recreation facilities**.
- 8. Begin to **develop the remaining lands at the CMCC**, based on the approved plan and the recommended implementation strategy (waterplay facility likely first).
- 9. Continually update the **inventory and mapping** of parkland and associated public and publicly available open space, as well as culture and recreation facilities.
- 10. **Broaden the mandate** of the proposed Parks, Recreation and Culture Department to better incorporate **arts, culture, as well as natural heritage**.
- 11. Promote the personal, social, environmental and economic **benefits of leisure** to the community.
- 12. Continue to **interact and collaborate with other public entities** within the township and beyond. Examples include the Public Library, the KPRD School Board, Otonabee Region Conservation Authority, Ganaraska Region Conservation Authority, Kawartha Conservation Authority, the Ontario Ministry of Natural Resources and Forestry, other municipalities, the County of Peterborough, the City of Kawartha Lakes, etc.
- 13. To reduce potential overlaps and timing conflicts, and to work toward filling service gaps, **continually collaborate with others who provide leisure programming, events and tournaments in the Township** re: program planning, and offerings and scheduling. Also, share participation and demand data to build a comprehensive picture about participation trends, and current and predicted future demand across all sectors.
- 14. To assist with short and medium-term program and facility planning, semi-annually host a **Community Forum** for culture and recreation user/community/advisory groups; leisure service providers; and interested citizen to discuss service adequacy, participation trends, unmet demand, and future demand indicators.
- 15. As the amount, range and quality of programming increases, and the population increases and changes, there will soon be a need for a twice-annually **Leisure Services Program Guide** that lists all scheduled programs and events, parks, facilities, service providers, and any other information that the Municipality decides to include in the catalogue (digital and paper versions).
- 16. Continually research **grants and other sources of operating and capital funds** to support priority initiatives.
- 17. Initiate discussion about creating a formal **Department of Parks, Recreation and Culture** with a full-time Director.
- 18. Acquire a sufficiently large **active recreation/sports park**.
- 19. Prepare a conceptual plan/design for **Old Millbrook School Park**.
- 20. Prepare a conceptual plan/design for **Maple Leaf Park**.

Appendix A: National and Provincial Policy Directions

Recently, a national policy paper and an Ontario charter were developed to influence the way individuals, communities and decision-makers think about parks and culture and recreation

services - and the critical roles that they play in enhancing individual, community, economic and environmental wellbeing in communities across the country.

A.1 A Renewed Framework for Recreation in Canada 2015

A Framework for Recreation in Canada 2015 and Pathways to Wellbeing are companion documents that recommend:

- a renewed definition of recreation,
- a wellbeing-based vision for recreation in Canada,
- values and principles of operation, and
- goals and priorities for action.

The document also highlights key challenges and opportunities, as well as important benefits of parks, recreation and culture. It also discusses the convergence and collaboration of various key strategies and frameworks that address interrelated public policy at the national, provincial and local levels. The paper speaks to “the re-visioning of recreation’s capacity for achieving wellbeing, and its potential to address challenges and troubling issues such as increasing sedentary living and obesity, decreased contact with nature, and inequities that limit recreation opportunities for some population groups”. The paper notes that to accomplish that “requires a clear understanding and commitment to a shared vision, values and goals, as well as the development and implementation of action plans”.

National Challenges and Opportunities

To varying degrees, all of these challenges and opportunities apply to Cavan Monaghan and the wider region.

- **demographic changes** – an aging population, a population that is increasing in diversity, rapid urbanization (80% of Canadians live in cities), and small and decreasing populations in rural areas.
- **challenges to health** – negative trends include increases in sedentary living/obesity, chronic diseases such as diabetes and heart disease, and mental health (depression and youth suicide).
- **economic inequities** – increasing income inequity is leading to decreasing access to recreation for those most in need.
- **social challenges** – many social changes have compounded feelings of isolation and negatively affected civic involvement, social connectedness, community engagement and social cohesion.

- **new and emerging technologies** – the recreation field is challenged to access and keep up with rapidly changing technologies and the increasingly time spent in sedentary and solitary pursuits.
- **the infrastructure deficit** – most communities have significant infrastructure deficits leading to reduced ability to realize the benefits of recreation.
- **threats to the natural environment** – are reducing nature-oriented spaces and places where people can enjoy recreational experiences. Growing threats to the natural environment have made the role of environmental stewardship increasingly important.

The Benefits of Recreation

The well documented evidence of the personal, social, economic and environmental benefits of culture and recreation and exposure to nature suggest that recreation and parks can address many current and future challenges through policies and practices that:

- enhance mental and physical wellbeing,
- help to build strong families and communities,
- help people connect with nature, and
- provide economic benefits by investing in parks, culture and recreation.

A Renewed Definition of Recreation:

Recreation is the experience that results from freely chosen participation in physical, social, intellectual, creative and spiritual pursuits that enhance individual and community wellbeing.

A Wellbeing-based Vision for Recreation in Canada

We envision a Canada in which everyone is engaged in meaningful, accessible recreation experiences that foster:

- individual wellbeing,
- community wellbeing, and
- the wellbeing of our natural and built environments.

Values (deeply held beliefs that guide decision-making, management and delivery of policies and practices):

- Public Good (access to all),
- Inclusion and Equity (everyone is welcomed and valued),
- Sustainability (the delivery system, and the natural and built resources), and
- Lifelong Participation.

Principles of Operation ('rules of the road' for how the recreation field carries out its business):

1. Outcome-driven,
2. Quality and Relevance,
3. Evidence-based,
4. Partnerships and Collaboration, and
5. Innovation.

Goals and Priorities

- **Active Living** - Foster active living through physical recreation.
- **Inclusion and Access** - Increase inclusion and access to recreation for populations that face constraints to participation.

- **Connecting People and Nature** - Help people connect to nature through recreation.
- **Supportive Environments** - Ensure the provision of supportive physical and social environments that

encourage participation in recreation and build strong, caring communities.

- **Recreation Capacity** - Ensure the continued growth and sustainability of the recreation field.

A.2 The Charter for Recreation and Parks in Ontario

The national philosophy and policy direction is reflected in the 2009 Charter for Recreation and Parks in Ontario which, in part, states that “everyone in Ontario has a right to **quality, accessible and inclusive** recreation and parks services in their communities – services that are essential for the health of Ontarians, the quality of life in our communities, and the sustainability of our environment”.

Every citizen in Ontario has the right and freedom to:

1. **Participation** – in safe, affordable and quality recreation programs that are in harmony with the diversity of the community.
2. **Active Living** – be physically active through participation in both organized and informal sport and recreation activities.
3. **Access to Nature and the Outdoors** – experience nature and access open spaces within their communities.
4. **Enriching Experiences** – experience the arts, cultural heritage, sport and recreation activities in their communities.

5. **A Welcoming and Inclusive Community** - be included in activities that build strong communities, engaged citizens and a healthy family life.
6. **Engagement** – be engaged in the planning of recreation and parks in their communities and to participate in volunteer activities.

Recreation and parks can help us to overcome the significant challenges facing our communities today, including physical inactivity and the rising cost of health care, a rise in youth violence and the protection of our environment.

A.3 The Scope of Vision 2035

Although slightly broader in scope than the renewed definition of ‘recreation’ defined in the **Framework for Recreation in Canada 2015**, Vision 2035 embraces the important role of enhancing wellbeing for individuals, the community, and the built and natural environments.

Vision 2035 also embraces the intent of the **Charter for Recreation and Parks in Ontario**.



Regular Council Meeting

To:	Mayor and Council
Date:	December 18, 2023
From:	Karen Ellis, Director of Planning
Report Number:	PEB 2023-54
Subject:	Proposed Telecommunication Tower – 994 Mount Pleasant Road

Recommendations:

1. That Council receive Report PEB 2023-54 for information;
2. That Council direct Planning Staff to issue a statement of concurrence to Spectra Point Inc. on behalf of Rogers Communication Inc. for the construction of a 91.5 metres (300.2 feet) guyed tower communications structure with the associated radio equipment cabinet on lands located at 994 Mount Pleasant Road because the project satisfies the intent of the Township’s policies with regard to the siting of new telecommunication facilities;
3. That the statement of concurrence include the following matters for consideration by the Proponent and Innovation, Science and Economic Development Canada (ISED):
 - a) the need for the proposed tower and opportunities for co-location in the area are thoroughly explored and documented;
 - b) the findings and recommendations of the Archaeological Study are accepted by the Ministry of Tourism, Culture and Sport;
 - c) the accepted Archaeological Study is circulated to the Township of Cavan Monaghan and the Williams Treaties Territory members for review and comment prior to any on-site activity;
 - d) the Construction Impact Mitigation and Management recommendations included in Section 4.0 of the Arborist Report prepared by Stantec and dated April 6, 2023, are implemented as conditions of approval;
 - e) a sediment and erosion control plan, prepared by a qualified professional, is submitted to and accepted by the Township prior to any on-site activities;
 - f) the use of tower lighting that reduces harm to migratory birds (i.e. the use of flashing lights instead of steady burning lights); and

g) that the letter of concurrence has a three (3) year expiration date.

Overview:

The Township of Cavan Monaghan's role in the establishment of new telecommunication towers and infrastructure is to provide proponents information about local policies, to review the proposed infrastructure from a land use planning perspective and to facilitate public consultation in accordance with local requirements.

The Township provides comments to Innovation, Science and Economic Development Canada (ISED) for their consideration. The Township does not have the authority to stop the construction of an antenna/tower system and the associated infrastructure.

ISED has the sole responsibility to approve new telecommunication facilities. Due to the federal jurisdiction, traditional land use planning tools like the Planning Act, Provincial Policy Statement (PPS), Official Plans and Zoning By-laws, Site Plan Control By-laws do not apply to antenna and tower systems. Notwithstanding the foregoing, the Township's Official Plan does provide criteria for consideration in the siting of new towers.

Where a land use authority has specific concerns regarding a proposed antenna system, the land use authority is expected to discuss reasonable alternatives and/or mitigation measures with proponents.

At the November 20, 2023 Council Meeting, PEB 2023-50 was presented to Council regarding a proposed telecommunication tower at 994 Mount Pleasant Road. A copy of that Report is provided as Attachment No. 1 to this Report.

Several members of the Mount Pleasant community attended the meeting to voice their opposition to the proposed tower. The main issues presented at the meeting included:

- The proposed tower is surplus to the need in the area. Other site options should be investigated including co-location opportunities;
- Visual impacts of the tower with regard to location and size (height);
- Environmental impacts to Best Pond and the Cavan Swamp provincially significant wetland;
- Impacts on migratory birds; and
- A lack of public consultation and lack of public awareness.

In addition to the above-noted issues, a resident provided opinion that the location and type of tower does not conform to the Township Official Plan or the Township's Antenna Policy.

On November 20, 2023 Council passed the following motion:

R-2023-304

Moved by: Byrne

Seconded by: Edgerton

That Council receive Report PEB 2023-50 for information; and

That Council defer the report to allow Staff time to compile a revised list of requests for Innovation, Science and Economic Development's (ISED) consideration from the input received today from the delegation and report back prior to the last Council meeting in December.

Carried

In response to the issues raised, Staff offer the following comments for consideration.

1. Need for the Tower

The Site Selection Report prepared by Spectra Point Inc. for this project indicates that Rogers Communications Inc. makes an effort to co-locate antennas on existing structures and in areas where they will be the least visually obtrusive. Opportunities to co-locate on existing structures were evaluated. There are no suitable options for co-location because the structures are beyond the distance or below the height required to address coverage deficiencies in the area, are not suitable for their network needs and would not improve their existing signal coverage to the expected quality levels.

Chris Legget of Spectra Point confirmed at the November 20, 2023 meeting that new towers can cost up to \$1 Million so the preference of service providers is to co-locate whenever possible. He also confirmed that adequate coverage for the Mount Pleasant community cannot be provided if the location of the tower is moved. The height and location of the tower are required to provide the "line of sight" necessary for quality service.

Coverage Plot data showing before and after coverage was provided by Spectra Point. The Coverage mapping is provided as Attachment No. 2 to this Report.

2. Visual impacts

A number of residents spoke about the visual intrusion of the tower on the landscape and requested that consideration be given to a shorter tower or monopole structure. In a telephone conversation with Chris Legget on November 24, 2023, Mr. Legget indicated that:

- Rogers may not consider a monopole structure because of coverage and cost implications;
- EORN (Eastern Ontario Regional Network) is unlikely to support such a tower because monopoles do not offer co-location opportunities; and
- A 70 metre self-support tower (monopole) is expensive and more of an eyesore than a guy wire structure.

A photo showing the anticipated impacts from a monopole structure is provided as Attachment No. 3 to this Report.

3. Environmental impacts

Within Cavan Monaghan, an Environmental Impact Study (EIS) is often a requirement for Planning Act applications to demonstrate compliance with the Provincial Policy Statement (PPS), the Growth Plan or Oak Ridges Moraine Conservation Plan (ORMCP) Policies, or to comply with Zoning By-law requirements (e.g., within the Natural Core (NC) Zone), or to acquire a development permit from the Conservation Authority. As the telecommunication tower is under Federal Regulation, none of the listed Plans or Regulations apply. Therefore, there is no requirement that an EIS be completed in support of the project.

Professional Township Staff conducted a review of the environmental materials received and conducted a site visit to the proposed development envelope at 994 Mount Pleasant Road. The location of the proposed tower installation was staked in the wooded area (Figure 1). The Photo was taken looking approximately 30 metres (100 feet) north at the southern edge of the agricultural field trail.

Using the local micro topography and the underlying vegetation species present, Township Staff established a conservative assessment of the wetland boundary. Using a handheld 30 metre field measuring tape, Staff measured more than 60 metres from the approximate top of slope to the stake in the field.

Figure 1



Figure 1 also illustrates upland deciduous tree species, including Sugar Maple, Black Cherry, and White Ash as stated in the submitted Arborist Report (completed by Stantec, dated April 6, 2023). The Arborist Report noted 78 trees of varying degrees of health would be removed and 13 trees would be preserved to accommodate the development envelope.

Section 4.2 of the Arborist Report provides seven (7) recommendations for protecting and managing trees during construction. These recommendations include a “no-work” migratory bird nesting window, a tree preservation area, and an expanded root protection (horizontal) area.

Township Staff are confident that the environmental impact of developing the proposed telecommunication tower can be mitigated and that the form and function of the wetland will not be significantly affected through this development.

4. Migratory Birds

Research indicates that the primary hazard for birds associated with guy wired telecommunication towers greater than 60 metres in height is the steady-burning aircraft lighting. The lighting attracts and disorients birds during the night leading to increased

collisions with the towers and guy wires. Flashing light systems do not have the same effect and are safer for birds than steady-burning lights and towers with no lights.

5. Lack of public consultation and public awareness

Spectra Point completed the public consultation in accordance with the requirements of the Township of Cavan Monaghan Antenna Policy. Seventeen (17) property owners were circulated the Public Consultation Package by first class prepaid mail. Notice of the proposed tower was also published in the Peterborough This Week newspaper.

In accordance with the Township's Antenna Policy, a public meeting is not required.

The public consultation completed by Spectra Point satisfies the Township's requirements for consultation on telecommunication tower projects.

Township of Cavan Monaghan Official Plan

As a reminder, the pertinent Cavan Monaghan Township Official Plan policies are found in Section 3.21 of the Plan. The policy recognizes that telecommunication antennas, towers and related structures are federally regulated and are not subject to the requirements of the Planning Act. The Section does, however, contain a list of items that the Township asks proponents to consider.

The criteria includes:

- a) Co-locate towers and antennas, where possible;
- b) Use existing towers and infrastructure, such as rooftops, water towers, utility poles, etc.;
- c) Blend the placement, style and colour of the antenna and equipment shelters into the surrounding environment;
- d) Maintain appropriate setbacks from road allowances;
- e) Maximize distances from residential areas;
- f) Maximize distances from public and institutional facilities such as schools, hospitals, community centres, day care and seniors' residences;
- g) Avoid natural features, vegetation, hazard lands (floodplains, steep slopes);
- h) Avoid areas of topographical prominence, where possible, to minimize long/short range viewsapes;
- i) Provide safe vehicular access locations; and,
- j) Generally be compatible with adjacent uses.

Staff requested that the Proponents consider the above-noted items at the pre-consultation stage of the project. Staff are satisfied that the Proponent gave due regard to the Township policies. For example, the location of the new tower was changed to move it farther away from the wetland areas. An Arborist Report was requested to address the proposed tree removal.

In consideration of the public comments made at the November 20, 2023 Council meeting, a sediment and erosion control plan and the use of lighting to reduce impacts to migratory birds were added to the list of matters for consideration in the construction of the tower.

Financial Impact:

None at this time.

Attachments:

Attachment No. 1: PEB 2023-50 Report

Attachment No. 2: Coverage Plot

Attachment No. 3: Air Photo with Monopole

Respectfully Submitted by,

Reviewed by,

Karen Ellis, B.A.A.
Director of Planning

Yvette Hurley,
Chief Administrative Officer



Regular Council Meeting

To:	Mayor and Council
Date:	November 20, 2023
From:	Karen Ellis, Director of Planning
Report Number:	PEB 2023-50
Subject:	Proposed Telecommunication Tower – 994 Mount Pleasant Road

Recommendations:

1. That Council receive Report PEB 2023-50 for information; and
2. That Council support the Township issuance of a letter of concurrence for the proposed telecommunication tower with the following conditions of approval:
 - a) that Industry Canada thoroughly evaluate the need for the proposed tower and the opportunities for co-location;
 - b) that the findings and recommendations of the Archaeological Study be accepted by the Ministry of Tourism, Culture and Sport;
 - c) that the accepted Archaeological Study be circulated to the Township of Cavan Monaghan and the Williams Treaties Territory members for review and comment prior to the issuance of a license by Industry Canada;
 - d) that the Construction Impact Mitigation and Management recommendations included in Section 4.0 of the Arborist Report prepared by Stantec and dated April 6, 2023, be included as conditions of approval of the license; and
 - e) that the letter of concurrence has a three (3) year expiration date.

Overview:

Proposal

Rogers Communication Inc. is proposing a new wireless communication installation on property located at 994 Mount Pleasant Road in part of Lots 13 and 14, Concession 14 (Cavan). The new communication structure will be located on the north-west side of the subject property, approximately 350 metres (1148 feet) north of Mount Pleasant Road and approximately 540 metres (1772 feet) west of Best Road. Maps showing the location of the subject property and the location of the proposed structure are provided as Attachment Nos. 1 and 2 to this Report.

The proposed facility includes a 91.5 metres (300.2 feet) guyed tower communications structure with the associated radio equipment cabinet on a cast in place reinforced concrete slab. The installation will occupy a ground compound area of 72.2 square metres (777.2 square feet).

In support of the proposed antenna system, Spectra Point Inc., working on behalf of Rogers Communications Inc., provided the following information:

- Site Selection Report dated July 19, 2023 (revised) (Spectra Point Inc.)
- Site Plan dated November 30, 2021 (Alex Marton Limited)
- Arborist Report dated April 6, 2023 (Stantec)
- Public Consultation Package dated December 14, 2022 (Spectra Point Inc.)
- Summary of Public Consultation dated May 20 2023 but received August 18, 2023 (Spectra Point Inc.)
- Coverage Plots – Before and After dated October 11, 2023 (Spectra Point Inc.)

All of this information is provided as Attachment Nos. 3 to 8 to this Report.

In an email dated October 18, 2023, Spectra Point Inc. Staff confirmed that the site is within the Williams Treaties Territory. As such, they contacted Curve Lake, Hiawatha, Alderville, Scugog, Beausoleil, Rama and Georgina Island First Nation communities. Additionally, an archeological study was completed in September 2023. Spectra Point Inc. Staff are waiting for approval of the archaeological study from the Ministry of Tourism, Culture and Sport. When the Study is approved, the Study will be provided to the seven (7) First Nations communities, Municipal Staff, and the public.

Eastern Ontario Regional Network (EORN)

This installation is part of the Cell Gap Project of the Eastern Ontario Regional Network (EORN). The aim of the project is to achieve:

- 99% voice call coverage in the eastern Ontario region where people live, work and travel on major roadways;
- 95% coverage in the eastern Ontario region where people live, work and travel on major roadways with standard definition service levels that can support email, web browsing and social media services; and
- at least 85% coverage in the eastern Ontario region where people live, work and travel on major roadways with high definition service levels that can support video conferencing, movie streaming and other more data intensive applications.

The project includes 300 new and expanded towers within the next 5 years.

Township of Cavan Monaghan Antenna Systems Policy

The Township of Cavan Monaghan Policy for Antenna Systems (Antenna Policy) became effective on August 7, 2018. The Policy recognizes that the Federal Minister of Industry has the authority under the *Radiocommunication Act* to issue radio authorizations and approve each site on which antenna system installations may be located. Proponents of

antenna systems do not require permitting of any kind from the Township. The Municipal responsibility is limited to the issuance of a letter of concurrence.

Consultation with the Township and area residents is required under certain conditions. Consultation with the Township of Cavan Monaghan is intended to ensure that the Township is aware of significant antenna system proposals within its boundaries and afford the Township and public an opportunity to provide comments and identify any concerns that can influence Industry Canada's decision with respect to the approval of proposed antenna systems and their location(s).

The Township's interests, on behalf of its constituents, are to prevent the proliferation and possible negative aesthetics of antenna systems within the Township while recognizing the business, institutional and consumer demands for such radiocommunication and broadcasting systems. The Policy confirms what telecommunication companies must consider, under Industry Canada procedures, if they wish to establish or expand antenna systems in the Township.

The Policy is provided as Attachment No. 9 to this Report.

In accordance with the Township's Antenna Policy, public notice was not required for this tower installation because the Policy exempts antenna systems from public notice when the tower is equal to or greater than 15 metres (49 feet 3 inches) in height and located on lands where the distance radius of three times (3X) the proposed tower height does not extend beyond the property on which the tower is to be built (Section 19.1). In this case, the distance radius does not extend beyond the property boundary of 994 Mount Pleasant Road. However, given that the proposed tower is located adjacent to the Hamlet of Mount Pleasant, circulation to property owners adjacent to the host property was requested by Staff. Spectra Point completed the recommended consultation.

The Township's Antenna Policy requires applicants to consider the following:

1. tower type;
2. placement of the tower on the subject lands, recognizing the proponent's engineering or network requirements and/or the particulars set out in the lease agreement between the proponent and landowner;
3. tower and base station/equipment shelter colours, preferably neutral to blend into the environment;
4. unobtrusive design of the base station/equipment shelter;
5. preservation of the existing landscape; and
6. additional landscaping.

Township of Cavan Monaghan Official Plan

The Township of Cavan Monaghan Official Plan policies related to the installation of telecommunication towers are found in Section 3.21 of the Plan. The policy recognizes that telecommunication antennas, towers and related structures are federally regulated and are not subject to the requirements of the Planning Act. The policy does, however, provide criteria that the Township asks proponents to consider.

The criteria includes:

- a) Co-locate towers and antennas, where possible;
- b) Use existing towers and infrastructure, such as rooftops, water towers, utility poles, etc.;
- c) Blend the placement, style and colour of the antenna and equipment shelters into the surrounding environment;
- d) Maintain appropriate setbacks from road allowances;
- e) Maximize distances from residential areas;
- f) Maximize distances from public and institutional facilities such as schools, hospitals, community centres, day care and seniors' residences;
- g) Avoid natural features, vegetation, hazard lands (floodplains, steep slopes);
- h) Avoid areas of topographical prominence, where possible, to minimize long/short range viewscales;
- i) Provide safe vehicular access locations; and,
- j) Generally be compatible with adjacent uses.

The Site Selection Report indicates that Rogers Communications Inc. makes an effort to co-locate antennas on existing structures and in areas where they will be the least visually obtrusive. For this installation, opportunities to co-locate on existing structures were evaluated. Existing wireless communication structures in the surrounding area that were evaluated are all beyond the distance or below the height required to address coverage deficiencies in the area, are not suitable for their network needs and would not improve their existing signal coverage to the expected quality levels.

Township Staff do not have the information or skills to evaluate the need for the proposed tower or the opportunities for co-location. Industry Canada should be asked to do a thorough review of these requirements prior to the issuance of a license for a new tower at this location.

Surrounding land uses of the proposed tower site include agricultural, environmental, institutional (Fire Hall No. 2) and residential lands. All residential dwelling units are located more than 400 metres (1312 feet) from the tower. Mount Pleasant Road is more than 300 metres (984 feet) from the tower.

The visual impacts of the equipment shelter will be minimal give the location of the shelter. Impacts can, however, be mitigated through screening and landscaping. Given the height of the tower and the associated guy wires, the tower will visually impact many residents in the Mount Pleasant area. Public comments received during the consultation process for this proposal indicate that there is significant concern about the impacts of the tower location on residents in the area.

The tower is to be located in a hedgerow between two existing agricultural fields. The Arborist Report indicates that no Species at Risk tree species were observed within or adjacent to the study area. Seventy-eight trees (78) are recommended for removal to facilitate the proposed construction.

The Arborist Report also contains recommendations for protecting and managing trees during construction. Staff recommend that these recommendations be included as conditions for the issuance of a license for the new tower.

In an email dated December 21, 2022, Don Allin of Otonabee Conservation (ORCA) confirmed that the proposed tower location is not located in an area regulated by ORCA's Ontario Regulation 167/06. The proposed location is more than 120 metres (400 feet) from a provincially significant wetland (Jackson Creek Headwaters) and more than 30 metres (100 feet) from other wetlands. The location is not within a known natural hazard area (flood or erosion). The tower location is approximately 190 metres (623.4 feet) from Jackson Creek.

Telecommunication towers by their very nature are not the most visually appealing structures. They are, however, necessary infrastructure to improve rural connectivity, support economic growth and enhance the quality of life for people.

Staff recognize there are specific locational requirements for wireless infrastructure. In their request for approval of this location, Staff are trusting that Rogers Communication Inc. and their representative (Spectra Point Inc.) completed a thorough and extensive review of other potential sites that would have less impact on Mount Pleasant.

Planning Staff are satisfied that the proposed site and tower design are generally consistent with Township Official Plan policies and the Township's Antenna Systems Policy. Review by Industry Canada is needed to assess the need for the new tower and the quality of the investigation for co-location opportunities. Recommendations/conclusions of the Archaeological Study and comments from the Williams Treaties Territory members also need to be considered in the licensing conditions.

Public Consultation

There has been and continues to be significant public interest and opposition to this project. A summary of public comments received as part of the formal circulation is provided in the summary prepared by Spectra Point Inc. attached hereto as Attachment No. 7.

Financial Impact:

None at this time.

Attachments:

- Attachment No. 1: Site Location Map
- Attachment No. 2: Proposed Structure Location
- Attachment No. 3: Site Selection Report (Spectra Point Inc.)
- Attachment No. 4: Site Plan dated November 30, 2021 (Alex Marton Limited)
- Attachment No. 5: Public Consultation Package dated December 14, 2022 (Spectra Point Inc.)
- Attachment No. 6: Arborist Report dated April 6, 2023 (Stantec)
- Attachment No. 7: Public Consultation Summary (dated May 20, 2023 but received August 18, 2023)
- Attachment No. 8: Coverage Plots – Before and After (October 11, 2023)
- Attachment No. 9: Township of Cavan Monaghan Antenna Policy

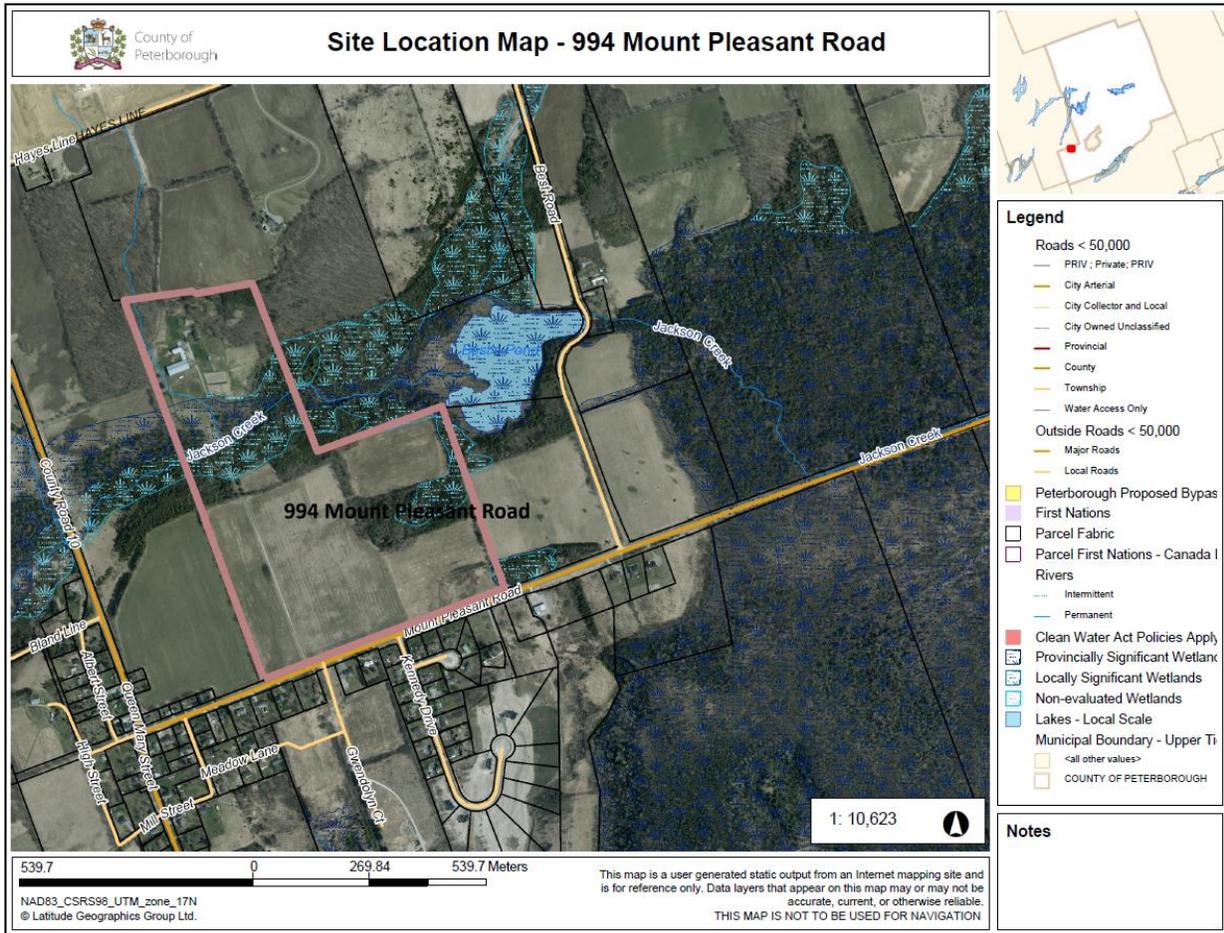
Respectfully Submitted by,

Karen Ellis, B.A.A.
Director of Planning

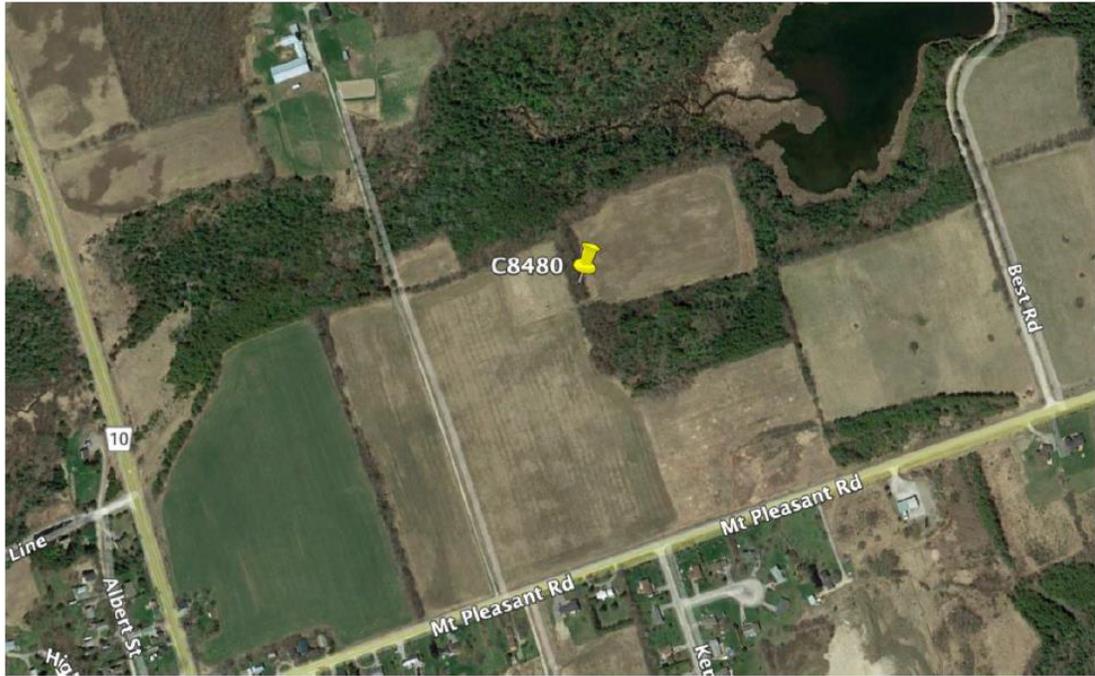
Reviewed by,

Yvette Hurley
Chief Administrative Officer

Attachment No. 1: Site Location Map



Attachment No. 2: Proposed Structure Location





Site Selection Report – Wireless Communications Site

Rogers Site Name: C8480

Proposed Location: 994 Mount Pleasant Rd, Cavan ON L0A 1C0

Wireless Communications Site

Introduction

The on-going increase in the use of wireless devices such as Smart Phones and Tablets for broadband wireless communication and internet access for personal, business and emergency purposes require the development of new wireless communication infrastructure. This includes new antennas and their support structures to meet demands of increased capacity and broadening services areas. Canadians currently use more than 28 million wireless devices on a daily basis. More importantly, each year Canadians place more than 6 million calls to 911 or other emergency numbers from their mobile phones.

Rogers Communications Inc. “Rogers” constantly strives to improve coverage and network quality for the sake of their clients. In the recent past, due to subscriber feedback, our Network Planning and Engineering departments have become aware of coverage deficiencies within the general area of Mount Pleasant in the north area of the Township of Cavan Monaghan.

This document outlines the site selection process in accordance with the requirements of Innovation, Science and Economic Development Canada’s Spectrum Management and Telecommunications Policy, CPC-2-0-03, Issue 5 (July 15, 2014) and provides a description of the system associated with the proposed wireless communication installation on property known as 994 Mount Pleasant Rd, Cavan ON L0A 1C0.

Background & Coverage Requirement

The selection of a wireless communications site works similarly to fitting a piece into a puzzle. In this case, the puzzle is a complex radio network, situated in a rural setting. Client demand, radio frequency engineering principles, local topography and land use opportunities working in concert with one another to direct the geography of our sites.

In order to achieve a reliable wireless network, carriers must provide a seamless transmission signal to alleviate any gaps in coverage. Gaps in coverage are responsible for dropped calls, and unavailable service to clients. Rogers Communications Inc. would utilize the following proposed site location in order to provide high quality network signal for its high-speed wireless voice and data network.

Wireless communication carriers constantly strive to improve coverage and network quality for the sake of their clients. Our current coverage at the Mount Pleasant area in the north portion of the Township of Cavan Monaghan is well below our acceptable standards and we need to respond to our customers’ requests for improved coverage in these areas.

The site as proposed will achieve the necessary engineering coverage objectives for our network. The proposed location will enhance much relied upon communication services in the area such as EMS Response, Police and Fire; will significantly improve our wireless signal quality for the local residents; those traveling along the major roads as well provide local subscribers with Rogers’ 4G wireless network

coverage and capacity for products and services such as BlackBerry, iPhone, cellular phone and wireless internet through the Rogers Rocket Stick technology in the surrounding area.

Proposed Site Location

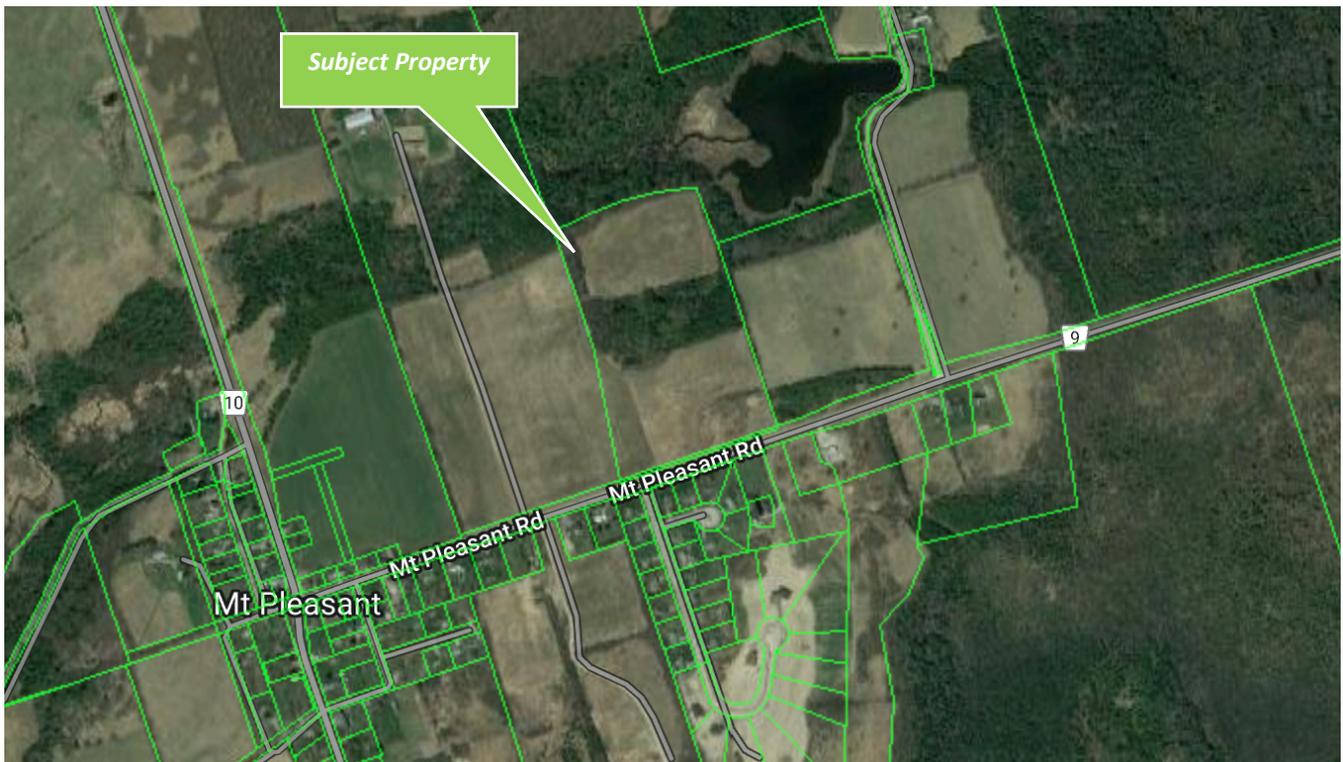
The Subject Property, with an approximate area of 12.13 Hectares is known as 994 Mount Pleasant Rd, Cavan ON L0A 1C0.

The geographic coordinates for the site are as follows:

Latitude (NAD83) N 44° 15' 58.4"
Longitude (NAD 83) W 78° 29' 23.5"

Figure 1 - Location Map

As shown on Figure 1, the Subject Property is located at an agricultural field.



Proposed Facility Location

The proposed wireless communication installation will be located on a property known 994 Mount Pleasant Rd, Cavan ON L0A 1C0. The property is currently on an agricultural field.

A copy of Rogers' surveyed site plan has been attached for your reference and information.

Figure 2 – Proposed tower location on subject property is shown with yellow pin in aerial photo below.



Description of Proposed System

As determined by Rogers' radio frequency engineers, Rogers is proposing to construct a 91.5-metre high (approximately 300 feet) Guyed Tower, which will be able to meet our network requirements.

This particular site will be a 3 sectored with 3 Main Sectors: LTE 600 RRU, 700 RRU, 2100 RRU and 5G 600 MHz, for the initial provision of services using (9) antennas, allowing for loading of future LTE and other technologies.

The Guyed Tower design has been used throughout Southern Ontario and is appropriate for rural areas such as the Township of Cavan Monaghan. The design, construction and installation of the facility will be consistent with required engineering practices including structural adequacy.

We have included, for your consideration, a sample photo simulation at the end of this report which illustrates the proposed installation from another site with a similar proposed tower. The actual photo simulation for the proposed site will be available prior to public consultation.

Rogers's installation as proposed will not affect the existing drainage patterns servicing the property's current use.

Access to the installation during construction and for maintenance purposes will be via an existing driveway entrance from Mount Pleasant to the proposed location on the subject property. The site would occupy a compound area of approximately 72.2 sq. meters, which will include both tower and equipment cabinet location as outlined on the site plan provided. The compound will also contain a walk-in equipment cabinet (WIC) containing radio equipment, backup battery power, maintenance tools, manuals and a first aid kit.

The installation would provide an opportunity to accommodate future technology services as well as potential co-location with other licensed carriers helping reduce the number of future structures in the area, which is encouraged by the Township of Cavan Monaghan and Innovation, Science and Economic Development Canada.

Co-location Assessment

Rogers Communications Inc. makes every effort to locate cellular sites where they will be the least visually obtrusive and always makes an initial effort to co-locate on existing structures. Apart from being encouraged by Innovation, Science and Economic Development Canada, co-location is one of the cornerstones of Rogers' site development philosophy.

Other potential site locations were evaluated and opportunities to co-locate onto existing structures were investigated. However, the wireless communication structures in the surrounding area that were evaluated are all beyond the distance or below the height required in order to address the coverage deficiencies in the area; are not suitable for our network needs and would not improve our existing signal coverage to the expected quality levels.

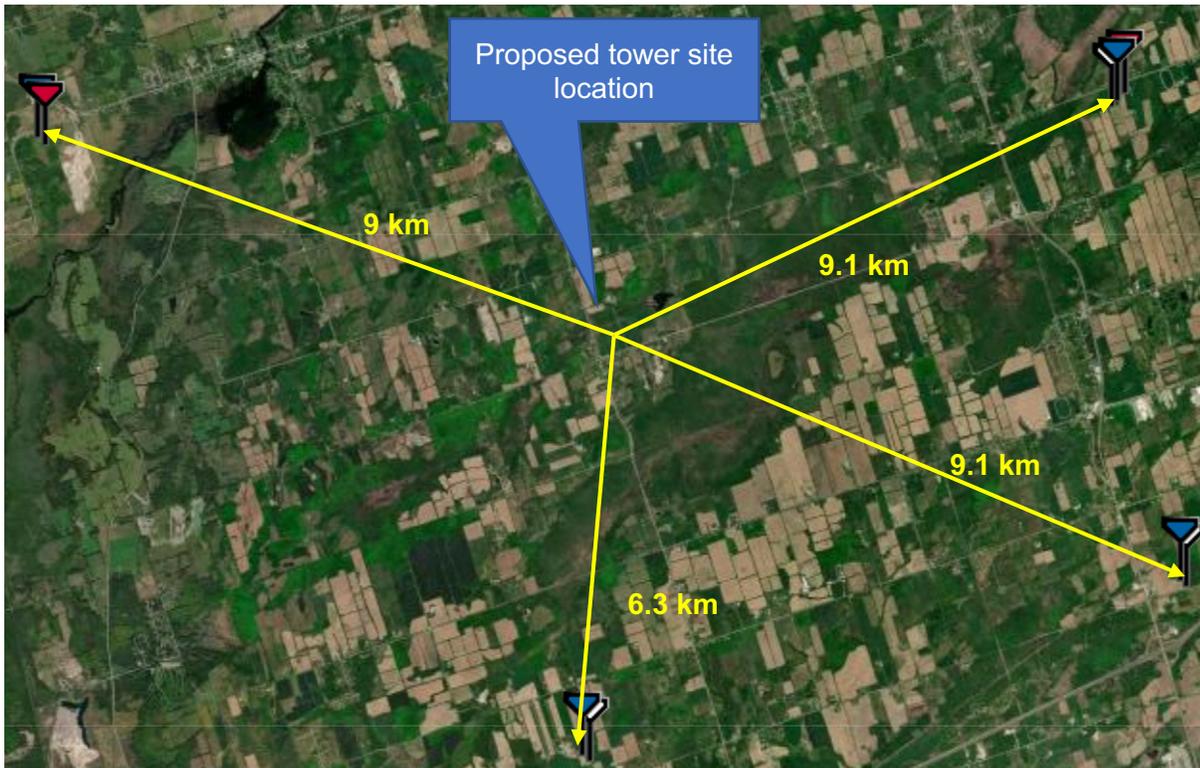
As part of our initial site evaluation process Rogers looked for an existing structure in the area, which would be suitable to install antennas. Unfortunately, there are none.

Rogers Site: C8480

Since there were no suitable structures readily available for co-location to accommodate our network coverage requirements, Rogers Communications Inc. had to consider the construction of its own installation.

A survey of installations in the surrounding area in relation to our proposed site location are illustrated on an aerial shown below - (Figure 3).

Figure 3 – Co-location Map



LEGEND:

Red Pin – Rogers Structure
Blue pin – Bell Mobility Structures
White pin – Other Structures

- The existing towers are too far in proximity from the required coverage area.

Please refer below for a sample of the installation for your reference (Figure 4). An additional package of viewscape is attached to this report. It simulates the view of the proposed installation from major visible intersections. The process of simulating the proposed facility into the existing conditions of each viewscape was done by superimposing an image of the proposed structure on a photograph taken for each viewscape.

Figure 4 – Sample image of proposed installation from a different site



*The above image is a photo simulation from another site with a similar tower. The actual photo simulation for the proposed property will be available prior to preconsultation.

Municipal and Public Consultation Process

Rogers Communications Inc. is regulated and licensed by Innovation, Science and Economic Development Canada to provide inter-provincial wireless voice and data services. As a federal undertaking, Rogers is required by Innovation Science and Economic Development Canada to consult with land-use authorities in siting antenna locations.

The consultation process established under Innovation, Science and Economic Development Canada's authority is intended to allow the local land-use authorities the opportunity to address land-use concerns while respecting the federal government's exclusive jurisdiction in the siting and operation of wireless voice and data systems.

As the provisions of the Ontario Planning Act and other municipal by-laws and regulations do not apply to federal undertakings, wireless communication facilities are not required to obtain municipal permits of any kind. Rogers is however required to follow established and documented wireless protocols or processes set forth by land-use authorities.

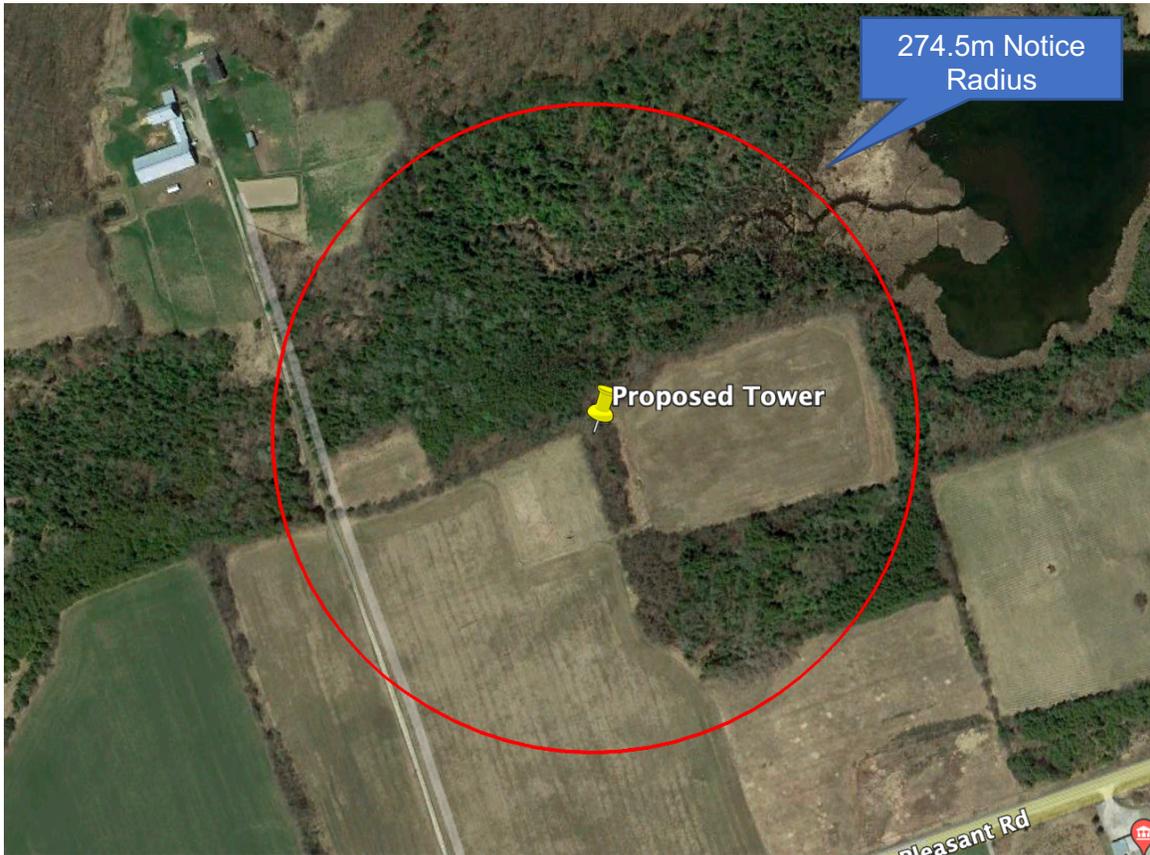
The Township of Cavan Monaghan has developed a protocol for establishing telecommunication facilities in the Township. In fulfillment of the Town's request for public notification, Rogers will be providing an information package to all those property owners located within a radius of approximately 295 meter from the leased area. Rogers will hold a Public Consultation allowing the opportunity for the public, the Township and Rogers to exchange information relevant to the proposal and address public comments. A copy of this information package will be provided to the Township of Cavan Monaghan Planning Department.

Location of surrounding residential uses

There is no dwelling located within the radius of 274.5 meters in proximity to the installation. The existing dwellings are well over 274.5 meters from the proposed site, as shown in the illustration below.

Please refer to the following page providing an aerial which displays the surrounding residential dwellings. (Figure 5)

Figure 5 – Surrounding residential dwellings.



Federal Requirements

In addition to the requirements for consultation with municipal authorities and the public, Rogers must also fulfill other important obligations including the following:

Canadian Environmental Assessment Act

Innovation, Science and Economic Development Canada requires that the installation and modification of antenna systems be done in a manner that complies with appropriate environmental legislation. This includes the Canadian Environmental Assessment Act, 2012 (CEAA 2012), where the antenna system is incidental to a physical activity or project designated under CEAA 2012, or is located on federal lands.

Rogers attests that the radio antenna system as proposed for this site is not located within federal lands or forms part of or incidental to projects that are designated by the Regulations Designating Physical Activities or otherwise designated by the Minister of the Environment as requiring an environmental assessment. In accordance with the Canadian Environmental Assessment Act, 2012, this installation is excluded from assessment.

For additional detailed information, please consult the Canadian Environmental Assessment Act at: <http://laws-lois.justice.gc.ca/eng/acts/C-15.21/>

Engineering Practices

Rogers attests that the radio antenna system as proposed for this site will be constructed in compliance with the National Building Code and The Canadian Standard Association, and respect good engineering practices including structural adequacy.

Transport Canada's Aeronautical Obstruction Marking Requirements

Rogers anticipates that the proposed installation will require markings or lighting and will submit the necessary applications to the appropriate parties to obtain required approvals.

In the instance where our structure requires lighting/marketing, these requirements would be in compliance with CAR 621 Standards Obstruction Markings. The aforementioned standards provide for:

A combination of a medium intensity flashing white light during the day and steady burning aviation red light and/or flashing aviation red beacons at night

For additional detailed information, please consult Transport Canada at: <http://www.tc.gc.ca/eng/civilaviation/regserv/cars/part6-standards-standard621-3808.htm>

Health Canada's Safety Code 6 Compliance

Health Canada is responsible for research and investigation to determine and promulgate the health protection limits for Exposure to the RF electromagnetic energy. Accordingly, Health Canada has developed a guideline entitled "Limits of Human Exposure to Radiofrequency Electromagnetic Field in the Frequency Range from 3kHz to 300 GHz – Safety Code 6". The exposure limits specified in Safety Code 6 were established from the results of hundreds of studies over the past several decades where the effects of RF energy on biological organisms were examined.

Radio communication, including technical aspects related to broadcasting, is under responsibility of the Ministry of Industry (Innovation, Science and Economic Development Canada), which has the power to establish standards, rules, policies and procedures. Innovation, Science and Economic Development Canada, under this authority, has adopted Safety Code 6 for the protection of the general public. As such, Innovation, Science and Economic Development Canada requires all proponents and operators to ensure that their installations and apparatus comply with the Safety Code 6 at all times.

Rogers Site: C8480

Rogers Communications Inc. attests that the radio antenna system described in this notification package will at all times comply with Health Canada's Safety Code 6 limits, as may be amended from time to time, for the protection of the general public including any combined effects of additional carrier co-locations and nearby installations within the local radio environment. In fact, emissions levels of Roger's wireless communication installations are far below the limits outlined in Safety Code 6.

More information in the area of RF exposure and health is available at the following web site: *Safety Code 6*: http://www.hc-sc.gc.ca/ewh-semt/pubs/radiation/radio_guide-lignes_direct-eng.php and <http://www.hc-sc.gc.ca/ewh-semt/radiation/cons/stations/index-eng.php>

Innovation, Science and Economic Development Canada's Spectrum Management

Please be advised that the approval of this site and its design is under the exclusive jurisdiction of the Government of Canada through Innovation, Science and Economic Development Canada. For more information on Innovation, Science and Economic Development Canada's public consultation guidelines including CPC-2-0-03 Issue 5 contact (<http://www.ic.gc.ca/epic/site/smt-gst.nsf/en/sf08777e.html>) or the local Innovation, Science and Economic Development Canada office at spectrum.toronto@ic.gc.ca:

Eastern and Northern Ontario District Office

2 Queen Street East
Sault Ste. Marie ON P6A 1Y3
Telephone: 1- 855- 465-6307
Fax: 705- 941- 4607
Email: ic.spectrumenod-spectredeno.ic@canada.ca

General information relating to antenna systems is available on Innovation, Science and Economic Development Canada's Spectrum Management and Telecommunications website (<http://www.ic.gc.ca/epic/site/smt-gst.nsf/en/home>)

Public consultation obligations

Rogers Communications Inc. is committed to effective public consultation. The public will be invited to provide comments to Rogers about this proposal by mail, electronic mail, phone or fax.

Innovation, Science and Economic Development Canada's rules contain requirements for timely response to your questions, comments or concerns. We will acknowledge receipt of all communication within **14 days** and will provide a formal response to the Municipality and those members of the public who communicate to Rogers, within **60 days**. The members of the public who communicated with Rogers will then have **21 days** to review and reply to Rogers a final response.

Conclusion

Access to reliable wireless communications services is of great importance to residents' and travelers' safety and well-being in today's society. Wireless technology has fast become the preferred method of conducting business and personal communications among a large part of the population.

The trend of future telecom is to become truly "wireless", that is the delivery of the voice and data communications via conventional telephone lines, such as telephone poles along streets and roads, will be virtually obsolete. The current wireless infrastructure will be able to meet this trend and still provide a reliable system.

Rogers feels that the proposed site is well located to provide and improve wireless voice and data services in the targeted area. The proposed site is also situated and designed to have minimal impact on surrounding land uses.

Rogers looks forward to working with the Township of Cavan Monaghan in providing improved wireless services to the community.

Rogers Communications Inc.
Network Implementation

Proponent's Contact Information - Rogers Communications Inc.

Spectra Point Inc. – Acting as Agent for Rogers Communications Inc.
3307-89 Dunfield Avenue
Toronto, ON M4S 0A4

Contact: Saja Elshaikh
Phone: (647) 447-8548
saja@spectrapoint.ca

SITE PLAN
 PROPOSED
 TELECOMMUNICATION INSTALLATION
 994 MOUNT PLEASANT ROAD
 PART OF LOT 13 AND 14
 CONCESSION 14
 TOWNSHIP OF CAVAN-MILLBROOK-NORTH MONAGHAN
 GEOGRAPHIC TOWNSHIP OF CAVAN
 COUNTY OF PETERBOROUGH

SCALE 1 : 750
 10 5 0 10 20 30 40 50 metres
 ALEX MARTON LTD.
 ONTARIO LAND SURVEYORS

METRIC
 DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN
 BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

SCHEDULE

PART	PART OF LOT	CONCESSION	P.I.N.	AREA sq.m
1				2689
2	13	14	28000-0458 (LT)	1013
3				2131
4	14		28000-0454 (LT)	2439

PART 2 SUBJECT TO EASEMENT AS IN AS IN INST.CVN3702

INTEGRATION NOTE
 BEARINGS SHOWN ARE GRID BEARINGS AND ARE DERIVED FROM OBSERVED REFERENCE
 POINTS (ORP'S) 1 AND 2 BY REAL TIME NETWORK OBSERVATIONS, UTM ZONE 17,
 NAD 83 (CSRS) (1997.0 EPOCH).
 DISTANCES SHOWN ON THIS PLAN ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID
 DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 1.00003.

INTEGRATION DATA

POINT ID	NORTHING	EASTING
ORP 1	4904212.255	700721.928
ORP 2	4904111.479	700456.313

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH
 CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

ELEVATION NOTE
 ELEVATIONS SHOWN HEREON ARE GEODEIC
 AND ARE DERIVED FROM GPS OBSERVATIONS
 USING REAL TIME NETWORK OBSERVATIONS.

SURVEYOR'S CERTIFICATE
 I CERTIFY THAT:
 1. THE SURVEY WAS COMPLETED ON THE 12TH DAY OF NOVEMBER, 2021.

NOVEMBER 30, 2021
 DATE
 A. MARTON
 ONTARIO LAND SURVEYOR

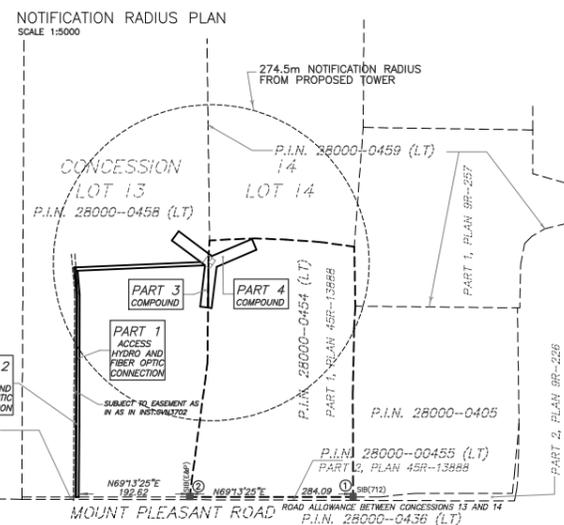
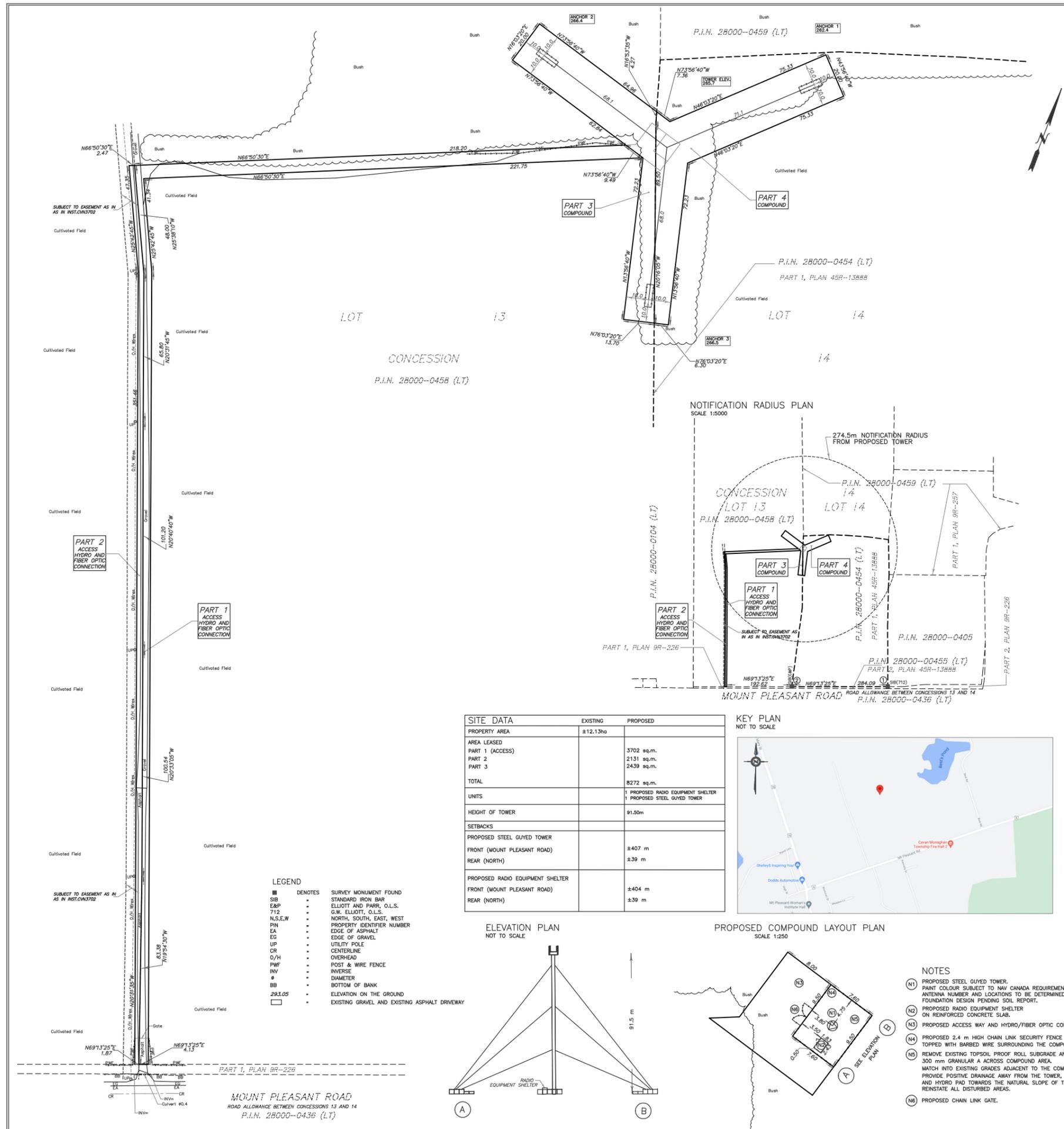
AMENDMENTS		
No.	DESCRIPTION	DATE
1	NOTIFICATION RADIUS PLAN REVISED	7.12.2021

Rogers™ LATITUDE N44°15'58.4"
 44.266218
 LONGITUDE W78°29'23.5"
 78.489873
 ELEVATION 265.7

SITE CODE: C8480
 SITE NAME: MT. PLEASANT

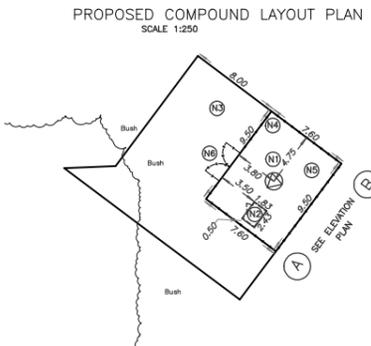
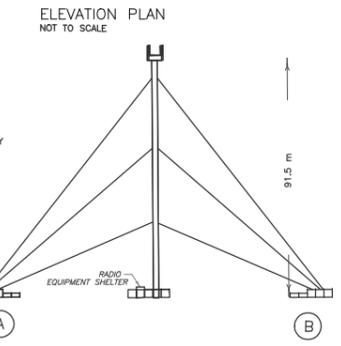
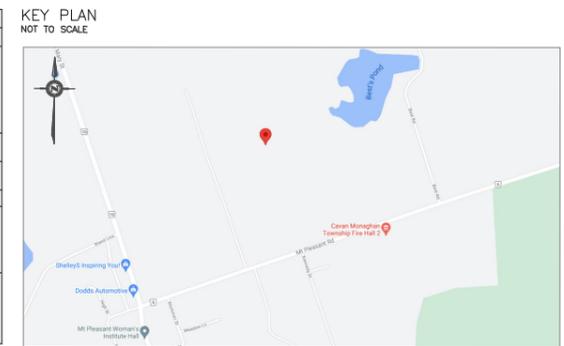
ALEX MARTON LIMITED
 ONTARIO LAND SURVEYORS
 160 APPLETON CRESCENT, UNIT 8,
 CONCORD, ONTARIO, L4K 4B2
 PHONE: 905-879-8889 FAX: 905-879-0770
 E-MAIL: alex@ammsurveying.ca
 WEBSITE: www.ammsurveying.ca

PARTY CHIEF : H.Z. FILE NAME: 2021-507(C8480).DWG
 DRAWN : F.V.M. PLOT SCALE: 1:750
 CHECKED : A.M. PROJECT No. 2021-507



SITE DATA

PROPERTY AREA	EXISTING	PROPOSED
AREA LEASED	±12.13ha	
PART 1 (ACCESS)		3702 sq.m.
PART 2		2131 sq.m.
PART 3		2439 sq.m.
TOTAL		8272 sq.m.
UNITS		1 PROPOSED RADIO EQUIPMENT SHELTER 1 PROPOSED STEEL GUYED TOWER
HEIGHT OF TOWER		91.50m
SETBACKS		
PROPOSED STEEL GUYED TOWER		
FRONT (MOUNT PLEASANT ROAD)		±407 m
REAR (NORTH)		±39 m
PROPOSED RADIO EQUIPMENT SHELTER		
FRONT (MOUNT PLEASANT ROAD)		±404 m
REAR (NORTH)		±39 m



- NOTES
- (N1) PROPOSED STEEL GUYED TOWER. PAINT COLOUR SUBJECT TO NAV CANADA REQUIREMENTS. ANTENNA NUMBER AND LOCATIONS TO BE DETERMINED. FOUNDATION DESIGN PENDING SOIL REPORT.
 - (N2) PROPOSED RADIO EQUIPMENT SHELTER ON REINFORCED CONCRETE SLAB.
 - (N3) PROPOSED ACCESS WAY AND HYDRO/FIBER OPTIC CONNECTION.
 - (N4) PROPOSED 2.4 m HIGH CHAIN LINK SECURITY FENCE TOPPED WITH BARBED WIRE SURROUNDING THE COMPOUND.
 - (N5) REMOVE EXISTING TOPSOIL PROOF ROLL SUBGRADE AND PLACE 300 mm GRANULAR A ACROSS COMPOUND AREA. MATCH INTO EXISTING GRADES ADJACENT TO THE COMPOUND. PROVIDE POSITIVE DRAINAGE AWAY FROM THE TOWER, SHELTERS AND HYDRO PAD TOWARDS THE NATURAL SLOPE OF THE SITE. REINSTATE ALL DISTURBED AREAS.
 - (N6) PROPOSED CHAIN LINK GATE.

- LEGEND
- | | | |
|---------|---------|---|
| ■ | DENOTES | SURVEY MONUMENT FOUND |
| SIB | | STANDARD IRON BARS |
| EAP | | ELLIOTT AND PARR, O.L.S. |
| 712 | | G.W. ELLIOTT, O.L.S. |
| N.S.E.W | | NORTH, SOUTH, EAST, WEST |
| PH | | PROPERTY IDENTIFIER NUMBER |
| EA | | EDGE OF ASPHALT |
| EG | | EDGE OF GRAVEL |
| UP | | UTILITY POLE |
| CR | | CENTERLINE |
| O/H | | OVERHEAD |
| PWF | | POST & WIRE FENCE |
| INV | | INVERSE |
| φ | | DIAMETER |
| BB | | BOTTOM OF BANK |
| 293.05 | | ELEVATION ON THE GROUND |
| □ | | EXISTING GRAVEL AND EXISTING ASPHALT DRIVEWAY |

MOUNT PLEASANT ROAD
 ROAD ALLOWANCE BETWEEN CONCESSIONS 13 AND 14
 P.I.N. 28000-0436 (LT)



Public Consultation Package – Wireless Communications Site

Rogers Site: C8480

Proposed Site Location: 994 Mount Pleasant Road, Cavan ON L0A 1C0

Information received shall form part of Innovation, Science and Economic Development Canada (ISED), formerly known as Industry Canada. Public Consultation Process under the Spectrum Management and Telecommunications Client Procedures Circular CPC-2-0-03, Issue 5, and will be collected in compliance with the Personal Information Protection and Electronic Documents Act. The information collected will be used solely for the purpose of documenting Rogers' consultation and communicating the results of this consultation, including your comments to the Township of Cavan Monaghan and/or ISED (formerly Industry Canada) and communicating with you concerning this proposal should that be required.

Prepared by: Spectra Point Inc. – Agents for Rogers Communications Inc.

Saja Elshaikh Municipal Land Use Planner
saja@spectrapoint.ca
Phone: (647) 447-8548

Wireless Communications Site

Purpose

This information package is an invitation to the public to provide comments regarding a proposed wireless communication installation at an address known as 994 Mount Pleasant Rd, Cavan ON L0A 1C0.

Introduction

The on-going increase in the use of personal cellular phones and other wireless devices and broadband internet for personal, business and emergency purposes requires the development of new wireless communication infrastructure. Canadians currently use more than 27.6 million wireless devices on a daily basis. More importantly, each year Canadians place more than 6 million calls to 911 or other emergency numbers from their mobile phones.

Rogers Communications Inc. "Rogers" constantly strives to improve coverage and network quality for the sake of their clients. In the recent past, due to subscriber feedback, our Network Planning and Engineering departments have become aware of coverage deficiencies within the general area of Mount Pleasant in the north area of the Township of Cavan Monaghan.

This document outlines the site evaluation and justification process in accordance with the requirements of ISED's Spectrum Management and Telecommunications Policy, CPC-2-0-03, Issue 5 (Jul. 15, 2014) and provides a description of the system associated with the proposed wireless communication installation on property known as 994 Mount Pleasant Rd, Cavan ON L0A 1C0.

Background & Coverage Requirement

The selection of a wireless communications site works similarly to fitting a piece into a puzzle. In this case, the puzzle is a complex radio network, situated in a rural setting. Client demand, radio frequency engineering principles, local topography and land use opportunities working in concert with one another direct the geography of our sites.

In order to achieve a reliable wireless network, carriers must provide a seamless transmission signal to alleviate any gaps in coverage. Gaps in coverage are responsible for dropped calls, and unavailable service to clients. Rogers Communications Inc. would utilize the following proposed site location in order to provide high quality network signal for its high speed wireless voice and data network.

The site as proposed will achieve the necessary engineering coverage objectives for our network. The proposed location will enhance much relied upon communication services in the area such as EMS Response, Police and Fire; will significantly improve our wireless signal quality for the local residents; those traveling along the major roads as well provide local subscribers with Rogers' 4G wireless network coverage and capacity for products and services such as BlackBerry, iPhone, cellular phone and wireless internet through the Rogers Rocket Stick technology in the surrounding area.

Proposed Site Location

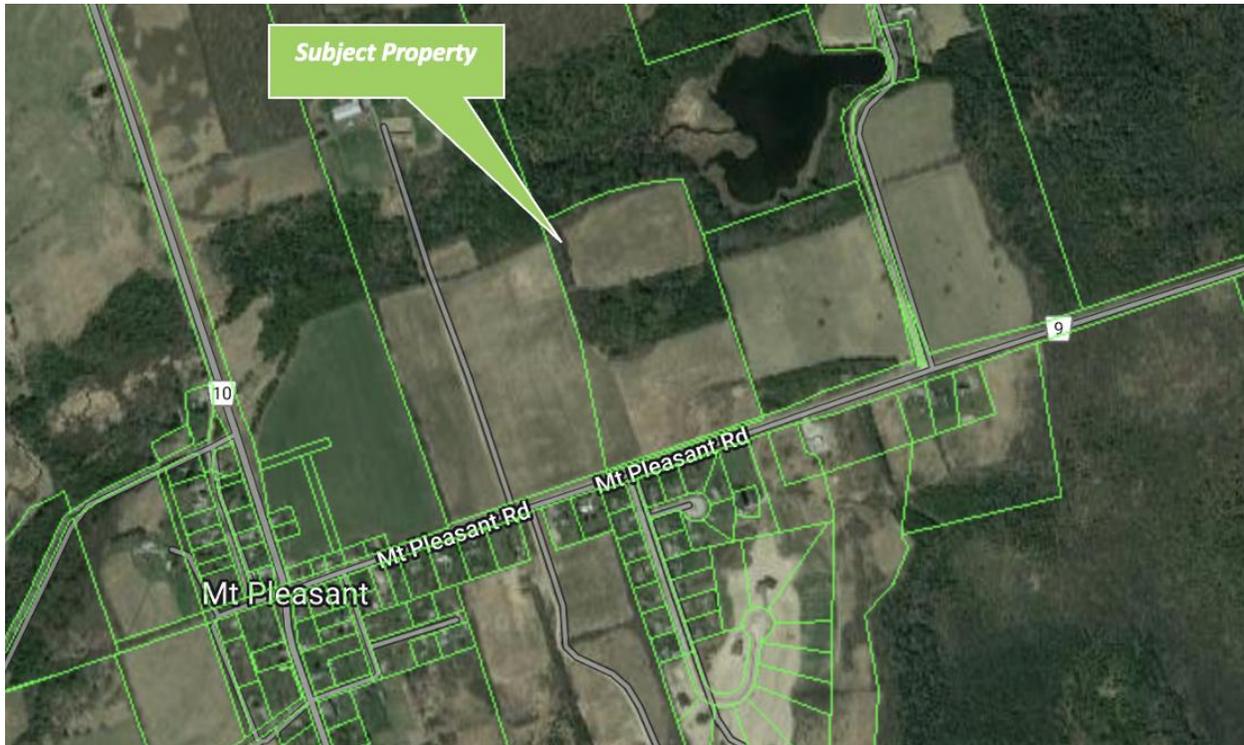
The Subject Property, with an approximate area of 12.13 hectares, is known as 994 Mount Pleasant Rd, Cavan ON L0A 1C0.

The geographic coordinates for the relocated site are as follows:

Latitude (NAD83) N 44° 15' 58.4"

Longitude (NAD 83) W 78° 29' 23.5"

Figure 1 – Proposed tower location on the subject property is outlined in an aerial image below.



Proposed Facility Location

The proposed wireless communication structure will be located at the north-west side of the subject property, approximately 350 metres north of Mount Pleasant Road; and approximately 540 metres west of Best Road.

Please refer to figure 2 below showing an image of tower location on the property.

Figure 2 – Proposed Tower Location



Description of Proposed Facility

The proposed installation for 994 Mount Pleasant Rd is a 91.5 metre Guyed Tower communications structure with associated radio equipment cabinet on cast in place reinforced concrete slab. The installation would occupy a ground compound area 72.2 square metres.

The Guyed Tower design has been used throughout the Township of Cavan Monaghan and is appropriate considering the area context. The design, construction and installation of the installation will be consistent with the required engineering practices including structural adequacy.

Please refer below for a sample of the installation for your reference (Figure 3). The viewscape provided below simulates the view of the proposed installation from Hayes Line. The process of simulating the proposed facility into the existing condition of the viewscape was done by superimposing an image of the proposed structure on a photograph taken for that viewscape. The photo simulation is intended to be a close representation of the proposed installation.

Figure 3 – Photo Simulation



Description of Proposed System

Rogers proposes to initially install a three Secteded Site with three Main Sectors (Layer 1 – Main Azimuth) Layer 1(Main Azimuth): LTE 600,700,2100, 5G 600MHz & future 5G - 3.5 GHz (Air Antenna). The installation would provide an opportunity to accommodate future technology services as well as other potential co-location with additional licensed carriers helping to further reduce the number of future structures in the area, which is encouraged by the Township of Cavan Monaghan and ISED.

Rogers makes every effort to minimize the impact of our installations. The following are some considerations and criteria used by Rogers when deploying tower installations:

- The proposed installation is well set back from the road to minimize its potential impacts on the community.
- The proposed installation is situated in a rural area well removed from any high-density residential land use.
- During construction precautions will be taken to minimize any disruption to current activities in the surrounding area. Once the site is in service, there will be no noise associated with the daily operation of the installation.

Co-location Assessment

Rogers Communications Inc. makes every effort to locate cellular sites where they will be the least visually obtrusive and always makes an initial effort to co-locate on existing structures. Apart from being encouraged by Innovation, Science and Economic Development Canada, co-location is one of the cornerstones of Rogers' site development philosophy.

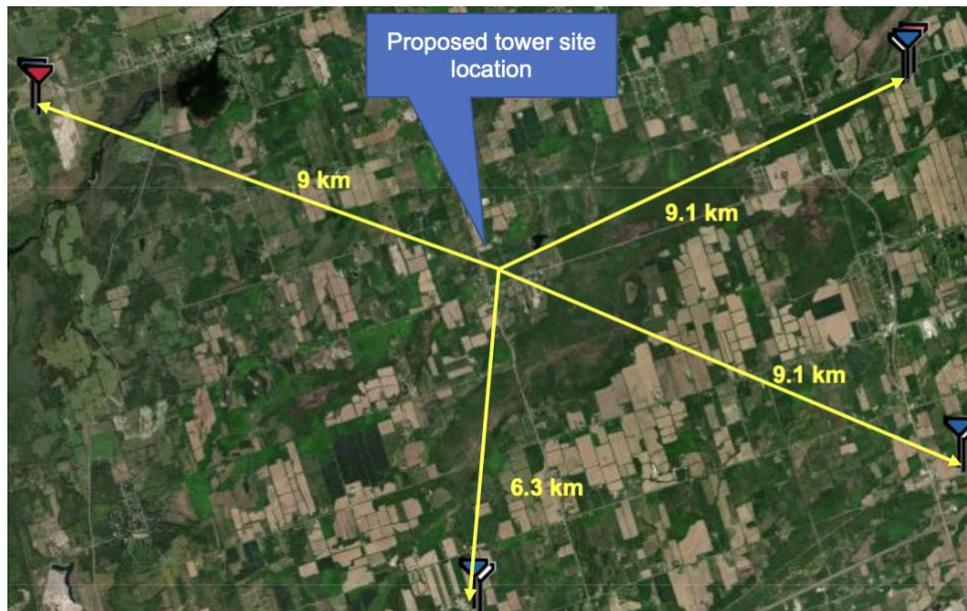
Other potential site locations were evaluated and opportunities to co-locate onto existing structures were investigated. However, the wireless communication structures in the surrounding area that were evaluated are all beyond the distance or below the height required in order to address the coverage deficiencies in the area; are not suitable for our network needs and would not improve our existing signal coverage to the expected quality levels.

As part of our initial site evaluation process Rogers looked for an existing structure in the area, which would be suitable to install antennas. Unfortunately, there are none.

Since there were no suitable structures readily available for co-location to accommodate our network coverage requirements, Rogers Communications Inc. had to consider the construction of its own installation.

A survey of installations in the surrounding area in relation to our proposed site location are illustrated on an aerial shown below - (Figure 4).

Figure 4 – Co-location Map



LEGEND:

Red Pin – Rogers Structure
Blue pin – Bell Mobility Structures
White pin – Other Structures

- The existing towers are too far from the required coverage area to be suitable for co-location purposes.

Proximity to Existing Residential dwellings

The Township of Cavan Monaghan encourages telecommunications towers to be situated in a manner that maximizes the distance to public uses. Rogers' proposed site location is set on a rural setting and provides a buffer between the existing residential uses surrounding the subject property.

The subject property is 12.13 hectares (approximately 29.97 acres) parcel of land, and there is no dwelling located within the radius of 274.5 meters in proximity to the installation. The existing dwellings are well over 274.5 meters from the proposed site.

Control of Public Access

The site facility would include One (1) radio equipment walk-in cabinet with an exterior finish that will blend in with its surroundings on a cast in place reinforced concrete slab 2.4-metre high chain link security fence would be installed around the base of the installation and would include one locked gate access point. The walk-in equipment cabinet (WIC) will contain radio equipment, backup battery power, maintenance tools, manuals and a first aid kit. The installation will also be equipped with a silent alarm system.

Municipal Consultation Process

Rogers Communications Inc. is regulated and licensed by ISED to provide inter-provincial wireless voice and data services. As a federal undertaking, Rogers is required by ISED to consult with land-use authorities in siting antenna locations.

The consultation process established under ISED's authority is intended to allow the local land-use authorities the opportunity to address land-use concerns while respecting the federal government's exclusive jurisdiction in the siting and operation of wireless voice and data systems.

As the provisions of the Ontario Planning Act and other municipal by-laws and regulations do not apply to federal undertakings, wireless communication facilities are not required to obtain municipal permits of any kind. Rogers is however required to follow established and documented wireless protocols or processes set forth by land-use authorities.

The Township of Cavan Monaghan has developed a protocol for establishing telecommunication facilities in the Township. In fulfillment of the Townships requirements for public notification, Rogers is providing an information package to all those property owners located within a radius of 274.5 metres (900.6 feet) tower facility. Concurrent to the mailing of this invitation, Rogers will place a notice in the local community newspaper. A copy of this information package will be provided to the Township of Cavan Monaghan planning staff and ISED as part of the municipal consultation process.

Federal Requirements

In addition to the requirements for consultation with municipal authorities and the public, Rogers must also fulfill other important obligations including the following:

Canadian Environmental Assessment Act

ISED requires that the installation and modification of antenna systems be done in a manner that complies with appropriate environmental legislation. This includes the Canadian Environmental Assessment Act, 2012 (CEAA 2012), where the antenna system is incidental to a physical activity or project designated under CEAA 2012, or is located on federal lands.

Rogers attests that the radio antenna system as proposed for this site is not located within federal lands or forms part of or incidental to projects that are designated by the Regulations Designating Physical Activities or otherwise designated by the Minister of the Environment as requiring an environmental assessment. In accordance with the Canadian Environmental Assessment Act, 2012, this installation is excluded from assessment.

For additional detailed information, please consult the Canadian Environmental Assessment Act at: <http://laws-lois.justice.gc.ca/eng/acts/C-15.21/>

Engineering Practices

Rogers attests that the radio antenna system as proposed for this site will be constructed in compliance with the National Building Code and The Canadian Standard Association, and respect good engineering practices including structural adequacy.

Transport Canada's Aeronautical Obstruction Marking Requirements

Rogers anticipates that the proposed installation will require markings or lighting and will submit the necessary applications to the appropriate parties to obtain required approvals.

In the instance where our structure requires lighting/markings, these requirements would be in compliance with CAR 621 Standards Obstruction Markings. The aforementioned standards provide for:

A combination of a medium intensity flashing white light during the day and steady burning aviation red light and/or flashing aviation red beacons at night

For additional detailed information, please consult Transport Canada at: <https://www.tc.gc.ca/en/transport-canada/corporate/acts-regulations/regulations/sor-96-433/standard-621.html>

Health Canada's Safety Code 6 Compliance

Health Canada is responsible for research and investigation to determine and promulgate the health protection limits for Exposure to the RF electromagnetic energy. Accordingly, Health Canada has developed a guideline entitled "Limits of Human Exposure to Radiofrequency Electromagnetic Field in the Frequency Range from 3kHz to 300 GHz – Safety Code 6". The exposure limits specified in Safety Code 6 were established from the results of hundreds of studies over the past several decades where the effects of RF energy on biological organisms were examined.

Radio communication, including technical aspects related to broadcasting, is under responsibility of ISED, which has the power to establish standards, rules, policies and procedures. ISED, under this authority, has adopted Safety Code 6 for the protection of the general public. As such, ISED requires all proponents and operators to ensure that their installations and apparatus comply with the Safety Code 6 at all times.

Rogers Communications Inc. attests that the radio antenna system described in this notification package will at all times comply with Health Canada's Safety Code 6 limits, as may be amended from time to time, for the protection of the general public including any combined effects of additional carrier co-locations and nearby installations within the local radio environment. In fact, emissions levels of Roger's wireless communication installations are far below the limits outlined in Safety Code 6.

More information in the area of RF exposure and health is available at the following web sites:

Safety Code 6:

http://www.hc-sc.gc.ca/ewh-semt/pubs/radiation/radio_guide-lignes_direct-eng.php

General Information:

<http://www.hc-sc.gc.ca/ewh-semt/radiation/cons/stations/index-eng.php>

ISED's, Spectrum Management

Please be advised that the approval of this site and its design is under the exclusive jurisdiction of the Government of Canada through ISED. For more information on ISED's public consultation guidelines including CPC-2-0-03, Issue 5 (Jul. 15, 2014) contact (<http://www.ic.gc.ca/epic/site/smt-gst.nsf/en/sf08777e.html>) or the local ISED office at spectrum.toronto@ic.gc.ca:

Eastern and Northern Ontario District Office

2 Queen Street East

Sault Ste. Marie ON P6A 1Y3

Telephone: 1- 855- 465-6307

Fax: 705- 941- 4607

Email: ic.spectrumenod-spectredeno.ic@canada.ca

General information relating to antenna systems is available on ISED's Spectrum Management and Telecommunications website (<http://www.ic.gc.ca/epic/site/smt-gst.nsf/en/home>)

Public consultation obligations

Rogers Communications Inc. is committed to effective public consultation. The public is invited to provide comments to Rogers about this proposal by mail, electronic mail, phone. Please send your comments to the address below by the close of business day on January 8th, 2023

Proponent's Contact Information:

Spectra Point, Agents for Rogers Communications Inc.

910- 5 Brockley Drive

Toronto, ON

M1P 3J2

Attn: Saja Elshaikh, Municipal Land Use Planner

E-mail: saja@spectrapoint.ca

Phone: (647) 447-8548

Closing Date for Submission of Written Public Comments

ISED's rules contain requirements for timely response to your questions, comments, or concerns. We will acknowledge receipt of all communication within **14 days** and will provide a formal response to the Municipality and those members of the public who communicate to Rogers, within **60 days**. The members of the public who communicated with Rogers will then have **21 days** to review and reply to Rogers a final response.

Land Use Authority Contact Information:

Township of Cavan Monaghan

Karen Ellis – Head Planner

988 County Rd 10

Millbrook ON L0A 1G0

Email: kellis@cavanmonaghan.net

Phone: (705) 932-9334

Conclusion

Access to reliable wireless communications services is of great importance to residents' and travelers' safety and well-being in today's society. Wireless technology has fast become the preferred method of conducting business and personal communications among a large part of the population.

The trend of future telecom is to become truly "wireless", that is the delivery of the voice and data communications via conventional telephone lines, such as telephone poles along streets and roads, will be virtually obsolete. The current wireless infrastructure will be able to meet this trend and still provide a reliable system. Strong wireless networks are building blocks for all sectors of the economy and must be considered a competitive advantage for Canadian communities. Improved wireless coverage also means better access to emergency services such as fire, police or ambulance, and greater business development opportunities. The availability of high quality, robust and reliable wireless networks results in significant direct and indirect benefits to all Canadians.

Rogers feels that the proposed site is well located to provide and improve wireless voice and data services in the targeted area. The proposed site is also situated and designed to have minimal impact on surrounding land uses.

Rogers looks forward to working with Township of Cavan Monaghan in providing improved wireless services to the community.

Spectra Point
Saja Elshaikh
Municipal Land Use Planner

Public Comment Record

Rogers Proposed Wireless Communications Installation

994 Mount Pleasant Rd, Cavan ON L0A 1C0

Name:

Address:

Telephone:

E-mail:

Comments

To be considered part of this consultation, comments must be received by close of business day on January 8th, 2023. Please forward your comments to:

Spectra Point Inc., Agents for Rogers Communications Inc.

c/o Saja Elshaikh, Municipal Land Use Planner

910 – 5 Brockley Drive

Toronto, ON M1P 3J2

Phone: 647-447-8448

E-mail: saja@spectrapoint.ca



**Communication Tower C8480
Cavan-Monaghan, Ontario
Arborist Report**

April 6, 2023

Prepared for:

Rogers Communication Canada Inc.

Prepared by:

Stantec Consulting Ltd.
300 Hagey Boulevard
Waterloo ON N2L 0A4
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161414344



COMMUNICATION TOWER C8480, CAVAN-MONAGHAN, ONTARIO, ARBORIST REPORT

This document entitled Communication Tower C8480, Cavan-Monaghan, Ontario, Arborist Report was prepared by Stantec Consulting Ltd. ("Stantec") for the account of Rogers Communications Canada Inc. (the "Client") to support the Communications Tower C8480 Project (the "Project"). In connection thereto, this document may be reviewed and used by the provincial and municipal government agencies participating in the permitting process in the normal course of their duties. Except as set forth in the previous sentence, any reliance on this document by any third party for any other purpose is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by _____



(signature)

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Reviewed by _____



(signature)

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COMMUNICATION TOWER C8480, CAVAN-MONAGHAN, ONTARIO, ARBORIST REPORT

Introduction
April 6, 2023

1.0 INTRODUCTION

Rogers Communications Canada Inc. (Rogers) has identified the subject Site as the proposed location for a new communication tower referred to as C8480. Stantec Consulting Ltd. (Stantec) has been retained by Rogers to complete an Arborist Report for the area of tree removal and potential impacts resulting from this project.

1.1 SITE LOCATION

The Site is located north of Mt. Pleasant Road, east of Peterborough County Road 10, and west of Best Road (refer to Figure 1). Access to the Site is gained via an existing gravel farm laneway. The access turns east approximately 90 degrees off this laneway along the north edge of an existing agricultural field. North of the agricultural field is a woodland separated from the field by a wooden fence. The access then meets an existing hedgerow dividing two agricultural fields. This hedgerow is the proposed location of C8480 and the Site for this report.

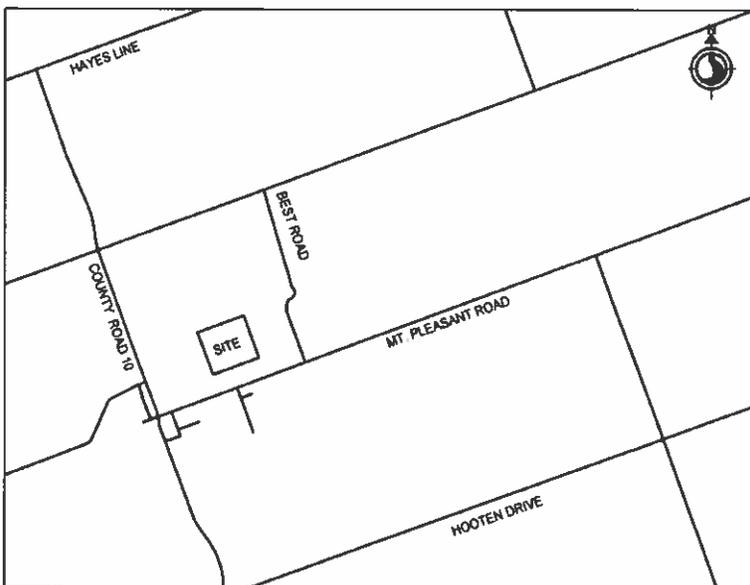


Figure 1: Site Location



COMMUNICATION TOWER C8480, CAVAN-MONAGHAN, ONTARIO, ARBORIST REPORT

Methodology
April 6, 2023

2.0 METHODOLOGY

Landon Black, ISA Certified Arborist (ON-1876A), completed a tree inventory and assessment of trees at the Site on March 14, 2023. All trees with a Diameter at Breast Height (DBH) of 10 cm or greater located within the Site or with driplines encroaching on the Site were inventoried and assessed. Invasive European Buckthorn were not inventoried.

The data collected for each tree includes tree genus, specific epithet (where possible to accurately determine), trunk integrity, crown structure, crown vigour, general health condition, DBH, and dripline radius. The tree locations were recorded with a Trimble D2 Catalyst.

A Tree Management Plan, located in Appendix A, was prepared to identify the approximate existing tree locations, tree tag identification numbers, the adjusted dripline radius as well as the recommended action for each inventoried tree. The tree inventory data was compiled, and is available along with the recommended action, further justifications, and recommendations in Table A of Appendix B.

2.1 TREE CONDITION RATING

The condition of inventoried trees was assessed using the following three categories:

- Trunk Integrity (TI)** - Assessment of the trunk for any defects.
- Canopy Structure (CS)** - Assessment of the scaffold branches and canopy of the tree.
- Canopy Vigour (CV)** - Assessment of the amount of deadwood versus live growth in the tree crown, also considers size, color and amount of foliage.

Outlined below are the detailed guidelines utilized for the condition classification:

- Good:** Defects if present are minor (e.g., twig dieback, small wounds), defective tree part is small (e.g., 5-8 cm diameter limb) providing little if any risk.
- Fair:** Defects are numerous or significant (e.g., dead scaffold limbs), defective parts are moderate in size (e.g., limb greater than 5-8 cm in diameter).
- Poor:** Defects are severe (trunk cavity in excess of 50%), defective parts are large (e.g., majority of crown).
- Dead:** Tree exhibits no signs of life.



Observation and Analysis
 April 6, 2023

3.0 OBSERVATION AND ANALYSIS

3.1 SITE OBSERVATIONS

The Site is a hedgerow extending from a woodland north of the Site to a second woodlot south of the Site. The hedgerow runs north-south and is interrupted by an east-west pathway connecting two agricultural fields. The woodlands to the north and south appear to contain predominantly native species including maple species, ash species, elm species, and others. Both woodlands appear to have a higher density of trees than observed within the hedgerow. The Site had a canopy of native species but had a significant understory of European Buckthorn of varying sizes. Emerald ash borer (EAB) signs were observed, and most ash individuals were dead. A total of 91 trees were assessed as a part of the DVI.

Table 1: Observed Species

<i>Family</i>	<i>Genus species (common name)</i>
<i>Cupressaceae</i> (cypress family)	<i>Thuja occidentalis</i> (eastern white cedar)
<i>Malvaceae</i> (Mallow family)	<i>Tilia americana</i> (basswood)
<i>Oleaceae</i> (Olive family)	<i>Fraxinus americana</i> (white ash)
<i>Rhamnaceae</i> (buckthorn family)	<i>Rhamnus cathartica</i> (European buckthorn)
<i>Rosaceae</i> (rose family)	<i>Malus sp.</i> (apple sp.) <i>Prunus serotina</i> (black cherry)
<i>Salicaceae</i> (willow family)	<i>Populus sp.</i> (poplar sp.)
<i>Sapindaceae</i> (Soapberry family)	<i>Acer negundo</i> (Manitoba maple) <i>Acer saccharum</i> (sugar maple)
<i>Ulmaceae</i> (Elm family)	<i>Ulmus americana</i> (white elm)

3.1.1 Species at Risk

There were no Species at Risk tree species observed within or adjacent the study area.

3.1.2 Trees Recommended for Preservation and Protection

A total of 11 trees within the Site are recommended to be protected with TPF as per detail TD-1 on Drawing L-900. Two (2) trees on the Site and all other trees beyond the Site are recommended to be preserved with TPF not being required due to the condition or location of the trees. TPF is recommended along the margin of the easement where trees to remain are adjacent.

3.1.3 Trees to be Removed

Seventy-eight (78) trees are recommended for removal to facilitate the proposed construction. Trees towards the north end of the Site are recommended for removal because their location falls within the



COMMUNICATION TOWER C8480, CAVAN-MONAGHAN, ONTARIO, ARBORIST REPORT

Observation and Analysis

April 6, 2023

proposed access route to the Site. The remainder of the trees recommended for removal are to facilitate the construction of the tower and one of the guy line anchors which is located within the hedgerow. The other two guy line anchors are located in adjacent agricultural fields and will not require tree removal.



4.0 CONSTRUCTION IMPACT MITIGATION AND MANAGEMENT

4.1 POTENTIAL CONSTRUCTION IMPACTS TO TREES

Trees are living organisms that react to changes in their environment. Trees can be damaged during construction without showing signs of damage until some years later. Most of the impacts relate to the removal of roots that results in the slow death of the tree because of its inability to absorb sufficient water and nutrients. Contained within this section are descriptions of the potential impacts this project may have on the trees, and impact mitigation methods that are intended to aid in the mitigation of impact during construction.

4.1.1 Soil Compaction and Root Damage

The leading cause of construction damage to trees is compaction of the soil around the roots or within the Tree Protection Zone (TPZ). The TPZ is the area around the tree or group of trees in which no grading or construction activity may occur. Equipment entering a TPZ compresses the air pockets around the roots inhibiting the tree from absorbing nutrients and water. This damage ultimately degrades the health of the tree. Accordingly, during the removal stage, equipment use within the preservation zones should be restricted to ensure that the tree's roots are not disturbed, thereby assisting in maintaining their continued health. The TPZ is protected and delineated by the TPF.

4.1.2 Mechanical Damage

Equipment can physically damage the trees through striking the trunk, limbs and/or roots. Felled trees can also cause damage during the tree removal stage of construction. Some damage is unavoidable due to proximity of adjacent trees; however, using proper equipment and best management practices the damage can be minimized. The Contractor should be held responsible for all avoidable damage to the trees during all stages of development. Note, trees shall always be felled away from adjacent trees to be retained.

4.1.3 Root Damage

The success of tree preservation is dependent not only on protecting the root zone from compaction and damage; it is also contingent upon the ability to ensure that the structural roots within the root plate are not disturbed. Impacts to this area may result in the structural failure of these trees. Excavating soil 1 m outside a tree's dripline, or within a dripline can damage roots by tearing and splitting back to the stem. This damage can later lead to rot that can kill the tree. All work within the dripline of an existing tree shall be approved by an Arborist. When excavating the top 30-60 cm of soil adjacent to trees, care must be taken. Excavation should cleanly sever the roots prior to stripping and removal of soil. Exposed roots with a diameter greater than 2.5 cm (1 inch) shall be pruned back to the soil face to prevent damage to the tree.



Construction Impact Mitigation and Management
April 6, 2023

4.2 PROTECTING AND MANAGING TREES DURING CONSTRUCTION

The following recommendations are presented to provide appropriate tree protection and management during the construction of this project.

1. Tree Preservation Hoarding shall be installed to protect trees identified for preservation. Tree Preservation Hoarding must be installed as per the detail identified in the drawings. Upon installation of the Tree Preservation Hoarding, the Contractor shall contact the Environmental Inspector to review and approve the fencing and its location prior to commencement of any site work. This shall be coordinated with City staff for final approval (as required). The protection fencing shall remain intact throughout the entire project. The fencing will be inspected weekly, and if required, repaired. The fencing shall be removed at the completion of all site works.
2. Upon receiving the necessary project approvals and prior to the commencement of tree removals, all trees designated for preservation must be flagged in the field. All designated preservation areas must be left standing and undamaged during site works. Removals are to be completed outside of migratory bird nesting season from April 1 to August 31. If removals occur within the restricted activity period, due diligence measures, including pre-clearing nest sweeps will be employed to reduce risk to nesting birds protected under the Migratory Birds Convention Act, 1994 and Migratory Birds Regulations. These surveys will be completed by a qualified biologist.
3. The TPZ is the area around a retained tree that is to be protected by Tree Preservation Hoarding. The TPZ is not to be used for any type of storage (e.g., storage of debris, construction material, surplus soils, and construction equipment). No trenching or tunneling for underground services shall be located within the TPZ. Construction equipment shall not be allowed to idle or exhaust within the TPZ.
4. Horizontal tree protection is a mitigation measure to be used when avoidance measures such as TPF is not feasible at the extent of the TPZ. Horizontal tree protection can be used in conjunction with TPF where protection is recommended at a reduced TPZ and where the impacts are compatible with horizontal protection (i.e., not in excavation zones). Horizontal tree protection is primarily recommended to mitigate for soil compaction within rooting zones and options include rig/swamp matting, plywood, and wood mulch. Refer to the drawings for specific requirements where horizontal protection is recommended.
5. Trees shall not have any rigging cables or hardware of any sort attached or wrapped around them, nor shall any contaminants be dumped within the protective areas. Further, no contaminants shall be dumped or flushed where they may come into contact with the feeder roots of the trees. If roots from retained trees are exposed, or if it is necessary to remove limbs or portions of trees after construction has commenced, the Project Arborist shall be informed and the proper actions conforming to City Policies and By-laws shall be carried out.



COMMUNICATION TOWER C8480, CAVAN-MONAGHAN, ONTARIO, ARBORIST REPORT

Construction Impact Mitigation and Management

April 6, 2023

6. Upon completion of the tree removals, all felled trees are to be removed from the site. No lumber or brush from the clearing is to be stored onsite. Any chipping, cutting or brush clean-up is to be completed outside the bird nesting season. If these activities are to occur within the restricted activity period, due diligence measures, including pre-clearing nest sweeps will be employed to reduce risk to nesting birds protected under the Migratory Birds Convention Act, 1994 and Migratory Birds Regulations. These surveys will be completed by a qualified Biologist.
7. The following is the process that shall be carried out if tree removals are requested during the restricted time indicated in the Migratory Birds Convention Act:

Tree and vegetation removal (including meadows, hay fields and pastures) should be completed outside of the migratory bird nesting season from April 1 to August 31 to avoid disturbance to nesting birds protected under the *Migratory Birds Convention Act* (MBCA) and grassland birds protected by the *Endangered Species Act* (ESA). Removals could take place during this restricted time period only if the requirements of the MBCA are met by completing nest clearing surveys by qualified individuals no more than seven days prior to any clearing activities.



COMMUNICATION TOWER C8480, CAVAN-MONAGHAN, ONTARIO, ARBORIST REPORT

Summary
April 6, 2023

5.0 SUMMARY

A total of 78 trees are recommended for removal to facilitate the proposed construction. A total of 13 trees beyond the limits of the easement will be preserved and protected in accordance with the Tree Management Plan appended to this report.



**APPENDIX A:
Tree Removals Plan, Drawing L-900**

APPENDIX B: Detailed Vegetation Inventory

TABLE A. Detailed Tree Inventory, C8480
 Cavan-Monaghan, County of Peterborough
 Data collected: March 14, 2023

Tree ID	Botanical Name	Common Name	Item 1	Item 2	Item 3	Item 4	Item 5	Calculated DBH	Duplicate Radius (m)	Critical Root Zone	Trunk Integrity	Trunk Structure	Crown Vigour	Overall Condition	Comments	Action	Remedial/Justification
1101	Acer saccharum	Sugar Maple	46	0	0	0	0	46	6.0	Good	Good	Good	Good	Good		Remove - Construction	When access statement
1102	Fraxinus americana	White Ash	18	0	0	0	0	18	2.0	3.6	Fair	Fair	Fair	Fair		Remove - Construction	When access statement
1103	Acer saccharum	Sugar Maple	74	0	0	0	0	74	3.0	3.6	Good	Good	Good	Good		Remove - Construction	When access statement
1104	Acer saccharum	Sugar Maple	22	0	0	0	0	22	3.0	3.6	Good	Good	Good	Good		Protect - Insulating	
1105	Fraxinus americana	White Ash	95	0	0	0	0	95	4.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1106	Fraxinus americana	White Ash	22	0	0	0	0	22	4.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1107	Acer saccharum	Sugar Maple	34	0	0	0	0	34	3.0	3.6	Fair	Fair	Fair	Fair		Remove - Construction	Construction area for lower
1108	Prunus serotina	Black Cherry	48	0	0	0	0	48	3.0	3.6	Fair	Fair	Fair	Fair		Remove - Construction	Construction area for lower
1109	Acer saccharum	Sugar Maple	18	0	0	0	0	18	3.0	3.6	Good	Good	Good	Good		Protect - Insulating	
1110	Populus sp.	Populus sp.	25	15	15	0	0	33	3.0	3.6	Fair	Fair	Fair	Fair		Remove - Construction	Construction area for lower
1111	Prunus serotina	Black Cherry	30	30	30	26	0	58	4.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1112	Prunus americana	White Ash	31	0	0	0	0	31	3.0	4.8	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1113	Acer saccharum	Sugar Maple	13	0	0	0	0	13	2.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1114	Acer saccharum	Sugar Maple	20	0	0	0	0	20	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1115	Acer saccharum	Sugar Maple	20	0	0	0	0	20	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1116	Thuja occidentalis	Eastern White Cedar	13	0	0	0	0	13	2.0	3.6	Poor	Poor	Fair	Fair		Remove - Construction	Construction area for lower
1117	Acer saccharum	Sugar Maple	12	0	0	0	0	12	2.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1118	Fraxinus americana	White Ash	29	27	0	0	0	40	4.0	3.6	Fair	Fair	Fair	Fair		Remove - Construction	Construction area for lower
1119	Fraxinus americana	White Ash	28	0	0	0	0	28	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1120	Fraxinus americana	White Ash	53	0	0	0	0	43	5.0	6.0	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1121	Fraxinus americana	White Ash	52	31	0	0	0	45	2.0	4.8	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1122	Thuja occidentalis	Black Cherry	21	0	0	0	0	21	4.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1123	Thuja occidentalis	Black Cherry	30	0	0	0	0	30	5.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1124	Malus sp.	Apple sp.	31	0	0	0	0	31	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1125	Acer saccharum	Sugar Maple	42	0	0	0	0	42	6.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1126	Acer saccharum	Sugar Maple	21	0	0	0	0	21	4.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1127	Acer saccharum	Sugar Maple	42	0	0	0	0	42	4.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1128	Acer saccharum	Sugar Maple	24	0	0	0	0	24	4.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1129	Fraxinus americana	White Ash	42	0	0	0	0	42	4.0	6.0	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1130	Prunus serotina	Black Cherry	77	0	0	0	0	77	0.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1131	Acer saccharum	Sugar Maple	23	0	0	0	0	23	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1132	Acer saccharum	Sugar Maple	18	13	0	0	0	22	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1133	Fraxinus americana	White Ash	12	0	0	0	0	12	1.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1134	Thuja occidentalis	White Elm	27	0	0	0	0	27	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1135	Malus sp.	Apple sp.	31	0	0	0	0	31	1.0	4.8	Poor	Poor	Poor	Poor		Remove - Construction	Construction area for lower
1136	Acer saccharum	Sugar Maple	17	0	0	0	0	17	2.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1137	Acer saccharum	Sugar Maple	18	0	0	0	0	18	2.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1138	Acer saccharum	Sugar Maple	25	15	0	0	0	29	2.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1139	Acer saccharum	Sugar Maple	23	0	0	0	0	23	4.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1140	Fraxinus americana	White Elm	10	0	0	0	0	10	1.0	1.7	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1141	Fraxinus americana	White Elm	45	0	0	0	0	45	5.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1142	Fraxinus americana	White Elm	40	0	0	0	0	40	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1143	Acer saccharum	Sugar Maple	33	29	0	0	0	44	5.0	4.8	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1144	Acer saccharum	Sugar Maple	21	0	0	0	0	21	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1145	Fraxinus americana	White Ash	10	0	0	0	0	10	1.2	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1146	Acer saccharum	Sugar Maple	33	0	0	0	0	33	3.6	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1147	Fraxinus americana	White Ash	10	0	0	0	0	10	1.2	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1148	Acer negundo	Manitoba Maple	18	0	0	0	0	18	1.0	3.6	Fair	Fair	Fair	Fair		Remove - Construction	Construction area for lower
1149	Malus sp.	Apple sp.	23	18	0	0	0	29	2.0	3.6	Poor	Poor	Poor	Poor		Remove - Construction	Construction area for lower
1150	Acer saccharum	Sugar Maple	12	0	0	0	0	12	2.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1151	Acer saccharum	Sugar Maple	21	20	0	0	0	29	4.0	3.6	Fair	Fair	Fair	Fair		Remove - Construction	Construction area for lower
1152	Acer negundo	Manitoba Maple	23	0	0	0	0	23	2.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1153	Fraxinus americana	White Ash	13	0	0	0	0	13	1.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1154	Fraxinus americana	White Ash	32	0	0	0	0	32	4.0	4.8	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1155	Prunus serotina	Black Cherry	20	0	0	0	0	20	2.0	3.6	Poor	Poor	Poor	Poor		Remove - Construction	Construction area for lower
1156	Malus sp.	Apple sp.	20	0	0	0	0	20	2.0	3.6	Poor	Poor	Poor	Poor		Remove - Construction	Construction area for lower
1157	Fraxinus americana	White Ash	24	0	0	0	0	24	2.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1158	Fraxinus americana	White Ash	14	0	0	0	0	14	2.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1159	Acer negundo	Manitoba Maple	21	0	0	0	0	21	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1160	Acer negundo	Manitoba Maple	42	0	0	0	0	42	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1161	Fraxinus americana	White Elm	15	0	0	0	0	15	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1162	Fraxinus americana	White Elm	29	0	0	0	0	29	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1163	Acer negundo	Manitoba Maple	16	0	0	0	0	16	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1164	Acer negundo	Manitoba Maple	16	0	0	0	0	16	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1165	Acer negundo	Manitoba Maple	16	0	0	0	0	16	3.0	3.6	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1166	Acer negundo	Manitoba Maple	31	0	0	0	0	31	3.0	3.6	Poor	Poor	Poor	Poor		Remove - Construction	Construction area for lower
1167	Acer saccharum	Sugar Maple	15	0	0	0	0	15	3.0	4.8	Good	Good	Good	Good		Remove - Construction	Construction area for lower
1168	Fraxinus americana	White Ash	31	0	0	0	0	31	3.0	4.8	Good	Good	Good	Good		Remove - Construction	Construction area for lower

TABLE A. Detailed Tree Inventory, C6480
Cavan-Monaghan, County of Peterborough
Data collected: March 14, 2023

Tree ID	Botanical Name	Common Name	DBH (cm)										Condition				Comment	Action	Removal/Injury Justification	
			Stem 1	Stem 2	Stem 3	Stem 4	Stem 5	Calculated DBH	Diameter Radial (m)	Critical Root Zone	Trunk Integrity	Crone Structure	Crone Vigor	Overall Condition						
1169	Acer saccharum	Sugar Maple	13	0	0	0	0	0	0	0	13	2.0	3.8	Good	Good	Good	Good	Lower limb wound from falling chimney	Remove - Construction	When access easement
1170	Acer saccharum	Sugar Maple	20	0	0	0	0	0	0	0	20	4.0	3.8	Good	Good	Good	Good	Lower limb wound from falling chimney	Remove - Construction	When access easement
1171	Acer saccharum	Sugar Maple	14	0	0	0	0	0	0	0	14	2.0	3.8	Good	Good	Good	Good		Protect - Hoarding	When access easement
1172	Pinus strobus	Black Cherry	29	14	0	0	0	0	0	0	32	5.0	3.8	Good	Good	Good	Good	Significant trunk lean, circumferential crown	Remove - Construction	When access easement
1173	Thuja americana	Spitwood	29	0	0	0	0	0	0	0	29	4.0	3.8	Good	Good	Good	Good		Remove - Construction	When access easement
1174	Fraxinus americana	White Ash	45	0	0	0	0	0	0	0	45	4.0	4.0	Good	Good	Good	Good		Remove - Construction	When access easement
1175	Fraxinus americana	White Ash	26	0	0	0	0	0	0	0	26	2.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1176	Fraxinus americana	White Maple	14	0	0	0	0	0	0	0	14	2.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1177	Fraxinus americana	White Ash	14	0	0	0	0	0	0	0	14	2.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1178	Fraxinus americana	White Ash	12	0	0	0	0	0	0	0	12	2.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1179	Pinus strobus	Black Cherry	31	0	0	0	0	0	0	0	31	0.0	4.8	Good	Good	Good	Good		Remove - Construction	When access easement
1180	Thuja americana	White Ash	30	0	0	0	0	0	0	0	30	0.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1181	Acer saccharum	Sugar Maple	63	0	0	0	0	0	0	0	63	8.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1182	Acer saccharum	Sugar Maple	28	0	0	0	0	0	0	0	28	5.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1183	Acer saccharum	Sugar Maple	17	0	0	0	0	0	0	0	17	3.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1184	Acer saccharum	Sugar Maple	12	0	0	0	0	0	0	0	12	2.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1185	Acer saccharum	Sugar Maple	12	0	0	0	0	0	0	0	12	2.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1186	Acer saccharum	Sugar Maple	12	0	0	0	0	0	0	0	12	2.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1187	Acer saccharum	Sugar Maple	12	0	0	0	0	0	0	0	12	2.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1188	Acer saccharum	Sugar Maple	12	0	0	0	0	0	0	0	12	2.0	3.6	Good	Good	Good	Good		Remove - Construction	When access easement
1189	Acer saccharum	Sugar Maple	13	12	0	0	0	0	0	0	16	3.0	3.6	Good	Good	Good	Good	Codebooked stems	Protect - Hoarding	When access easement
1190	Acer saccharum	Sugar Maple	16	0	0	0	0	0	0	0	16	3.0	3.6	Good	Good	Good	Good	Asymmetrical crown	Protect - Hoarding	When access easement
1191	Acer nigricans	Norfolk Maple	19	0	0	0	0	0	0	0	19	3.0	3.6	Good	Good	Good	Good		Protect - Hoarding	When access easement

1. Total Action Trees

Project - Hoarding	11
Project - No Hoarding	2
Remove - Construction	78
Total	91



**910-5 Brockley Drive
Toronto, ON
M1P 3J2**

**Saja Elshaikh
T: 647-447-8548
email: saja@spectrapoint.ca**

May 20th, 2023

Attention: Karen Ellis
Director of Planning
988 County Road 10
Millbrook ON L0A 1G0

RE: Rogers Communications Inc Tower at 994 Mount Pleasant Road, Cavan ON L0A 1C0

Summary of Public Consultation

We are pleased to provide the following summary of public consultation for Rogers proposed telecommunications tower at 994 Mount Pleasant Road, Cavan ON L0A 1C0. Public consultation began December 1st, 2022, when an ad was placed in the Peterborough This Week newspaper. Information packages were also mailed to all property owners within 274.5 meters of the tower base. We received several inquiries regarding the proposed tower. Public Consultation was closed on April 14th, 2023.

During the pre-consultation process with the Township, we were asked to move the tower south so that the guy anchor would not land inside the ORCA development control area. The original tower location was revised, and the proposed location was moved in accordance with the Townships request.

Summary of Public Consultation Comments

Table 1: The table below highlights specific comments received from each resident.

Comments, Concerns and Requests							
Residents	Concerns About Health and Safety	Concerns About Property Values	Concerns About Environment	Concerns About Light Pollution	Concerns About Indigenous Lands	Concerns About Tower Location	Concerns About View Obstruction
Emma Collinson	X						
Tay Collinson	X						
Amanda Collinson							
Ted O'Connor	X		X			X	
Lynn O'Connor	X		X			X	
Bryan Faulkner	X	X					
Ashleigh Faulkner	X	X					
Natasha Parker	X					X	X
Michael Parker	X	X	X				X
Bruce Burke			X			X.	
A Mahim			X		X		
Dan and Amy Moloney			X			X	
Natalie Davenport			X			X	
Dan, Virginia, Liza & Darla McWilliams	X	X	X		X	X	
Rick and Catherine Awalt	X						
Zibby Naruszewicz	X		X			X	
Matt Gifford	X						
Rick Allen	X	X					
Jessica Monk	X		X				

Comments, Concerns and Requests							
Residents	Concerns About Health and Safety	Concerns About Property Values	Concerns About Environment	Concerns About Light Pollution	Concerns About Indigenous Lands	Concerns About Tower Location	Concerns About View Obstruction
Keith Eggleton					X	X	
Avery Eggleton	X		X				
Peter Ludgate		X	X				
Monique Guillemette							
Ted Nagowski	X		X			X	
Keegan	X						
Gord McFarland	X	X	X			X	
Rick and Diane McConnell							
Mike Hoskin and Kristen Short				X		X	X
Katherine Kollaard	X						
M.J Davenport and Associates Ltd.	X		X		X	X	

Rogers Response to Comments and Concerns

- **Concerns about Health and Safety** - According to Section 4.2 of ISED CPC-2-0-03 (Issue 6) Radiocommunication and Broadcasting Antenna Systems Guidelines, concerns that are not relevant include: questions whether the Radiocommunication Act, this document, Safety Code 6, locally established by-laws, other legislation, procedures, or processes are valid or should be reformed in some manner. As result, we cannot respond to questions regarding health and safety.
- **Concerns about Property Values** - According to Section 4.2 of ISED CPC-2-0-03 (Issue 6) Radiocommunication and Broadcasting Antenna Systems Guidelines, concerns that are not relevant include: potential affects that a proposed antenna system will have on property values or municipal taxes. As result, we cannot respond to questions regarding property values.

- **Concerns about the Environment** – Our proposed tower location has been reviewed by the Otonabee Conservation Authority and they provided the following comments. “Donald Allin from the Otonabee Conservation Authority has provided the following comment regarding our proposed tower: “The tower is not located in an area regulated by this Authorities Ontario Regulation 167/06 as it is setback further than 120 metres from a Provincially Significant Wetland and further than 30 metres from other wetlands. The proposed location is not within a known natural hazard area (flood or erosion). The proposed tower location is approximately 190 metres setback from Jackson Creek.”
- **Concerns About Light Pollution** – Whether or not a tower will be lit is the purview of NAV Canada and Transport Canada. While the tower will likely have lighting consistent with requirements of Federal regulations, Rogers will install shielding which will deflect light from being directed toward the ground and go some way toward reducing the amount of light that may disturb residence near the tower.
- **Concerns about Indigenous Lands** - Prior to construction, an Archeological Assessment will be conducted in the area of the proposed facility to confirm there will be no significant impact to any sensitive features which may exist on the property.
- **Concerns about Tower Location** –The tower must be deployed within the search area provided by EORN and Rogers. The search area is determined by the coverage requirements of both EORN and Rogers. We were only able to identify one willing landlord within the search area.
- **Concerns about View Obstruction** – We recognize that a communications tower will change the view for some residence. Unfortunately, infrastructure will from time to time impact the local area. Moving the tower will have the same effect at any new location. We always make every effort to minimize impact. For this site we could only identify one willing landlord in the search area.

Record of Communication

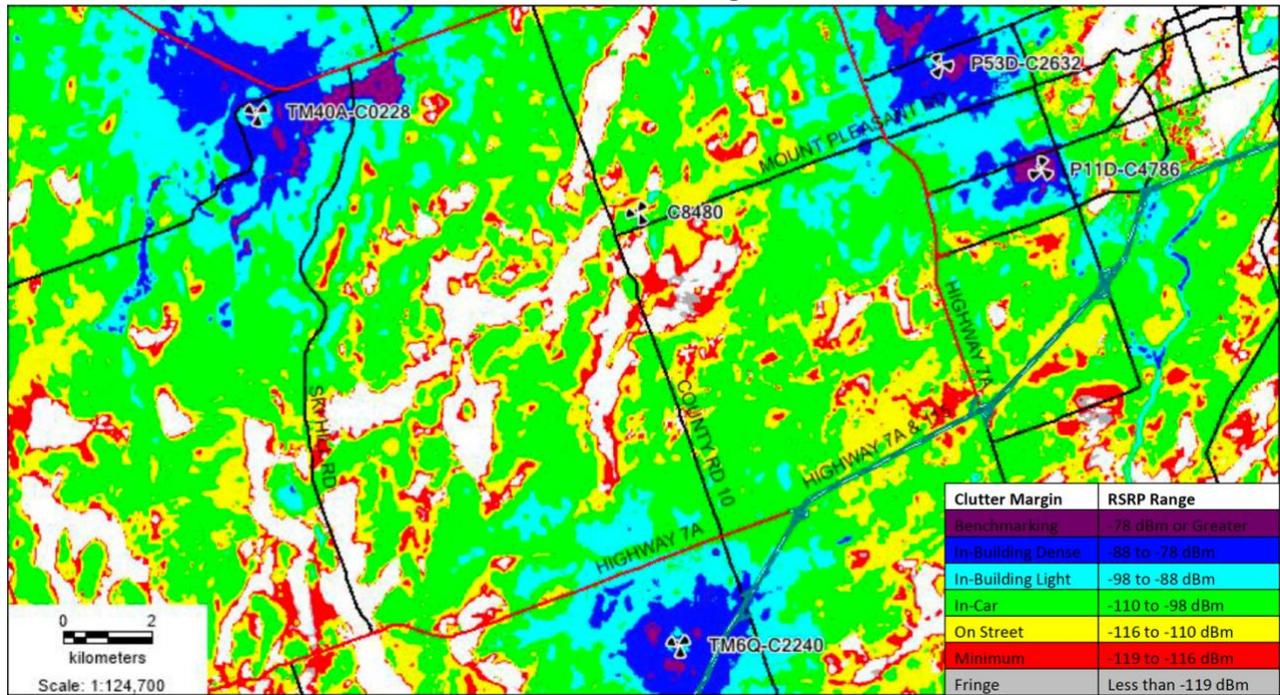
Below is a list of emails and phone calls received during the public consultation. that we responded to.

- M.J. Davenport & Associates Ltd.– Emailed on December 15th, 2022.
 - Follow-up email on January 1st, 2023.
 - Follow-up email on January 8th, 2023.
- Bruce Burke – Emailed on December 15th, 2022.
- A Mahim – Emailed on December 16th, 2022.
- Dan and Amy Moloney – Emailed on December 19th, 2022.
- Ted O'Connor – Emailed on December 30th, 2022.
- Lynn O'Connor – Emailed January 4th, 2023.
- Natalie Davenport – Emailed on January 4th, 2023.
- Dan, Virginia, Liza & Darla McWilliams – January 5th, 2023.
- Rick and Catherine Awalt – Emailed on January 6th, 2023.
- Zibby Naruszewicz – Emailed January 6th, 2023.
- Matt Gifford – Emailed on January 7th, 2023.
- Rick Allen – Emailed on January 7th, 2023.
- Emma Collinson – Emailed on January 7th, 2023.
- Tay Collinson – Emailed on January 7th, 2023.
- Jessica Monk – Emailed on January 7th, 2023.
 - Follow-up email February 19, 2023.
- Rick and Diane McConnell – Emailed on January 7th, 2023.
- Keith Eggleton - Emailed on January 7th, 2023.
- Avery Eggleton - Emailed on January 7th, 2023.
- Peter Ludgate – Emailed on January 7th, 2023.
- Monique Guillemette – Emailed on January 7th, 2023.
- Bryan Faulkner – Emailed on January 7th, 2023.
- Ashleigh Faulkner – Emailed on January 8th, 2023.
- Natasha Parker – Emailed on January 8th, 2023.
 - Follow-up email February 23, 2023.
- Michael Parker – Emailed on January 8th, 2023.
- Ted Nagowski – Emailed on January 8th, 2023.
- Keegan – Emailed on January 8th, 2023.
- Gord McFarland – Emailed on January 8th, 2023.
- Amanda Collinson – Emailed on January 8th, 2023.
- Mike Hoskin and Kristen Short – Emailed on January 8th, 2023.
- Katherine Kollaard – Emailed on January 8th, 2023.

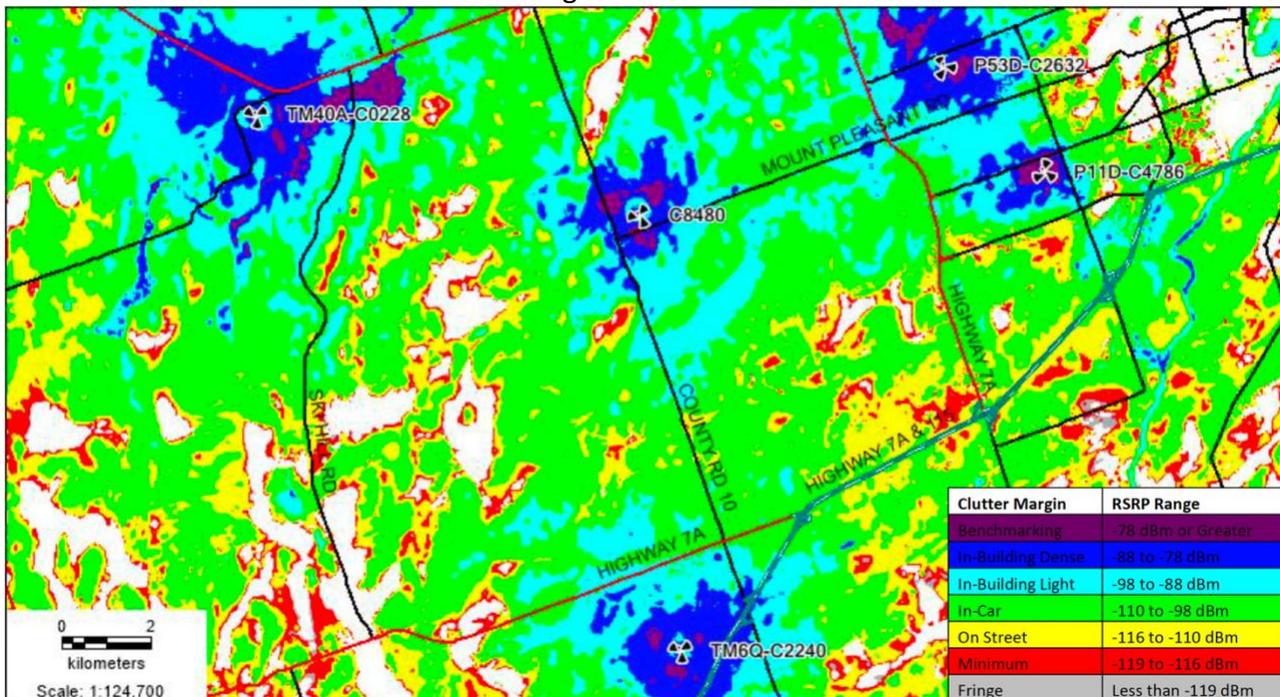
Attachment No. 8: Coverage Lots - Before and After

Rogers C8480 – Coverage Plots

Current Coverage



Coverage After Installation



 <p>The Township of Cavan Monaghan – Policy for Antenna Systems</p>			
Policy Title:	Antenna Systems	Policy Number	2018-01
Effective Date:	August 7, 2018	Revision Number: Replaces:	New Policy
Prepared By:	Planning Department	Approved By:	Council

Policy Statement:

1. The Township of Cavan Monaghan recognizes that the Federal Minister of Industry has the authority under the *Radiocommunication Act* to issue radio authorizations and approve each site on which Antenna System installations may be located.
2. As such, Proponents of Antenna Systems do not require permitting of any kind from the Township.
3. Notwithstanding the above, the Federal Government of Canada’s regulating body, Industry Canada, amended its procedures as of January 1, 2008 to promote a better balance between the rights of Proponents of Antenna Systems, municipalities and the public who may be affected by the selection and installation of Antenna Systems within the Township.
4. Industry Canada’s “Client Procedure Circular”, CPC-2-0-03, contains the procedures that require Proponents of Antenna Systems to consult with land-use authorities (LUA), such as the Township of Cavan Monaghan under certain circumstances. The purpose of the consultation is to ensure that the Township is aware of significant Antenna Systems proposed within its boundaries and afford the Township and public an opportunity to provide comments and concerns which may influence Industry Canada’s decisions with respect to the approval of proposed Antenna Systems and their location.
5. Consultation must respect the Federal Government’s exclusive jurisdiction over radiocommunication and broadcasting but does not give a municipality the right to prevent any Antenna System proposal.

6. The following consultation protocol is deemed to be fair and transparent, and ensures that any concerns of the Township and the Local Public affected by the installation is addressed at an early stage of deployment while recognizing that the Federal Government's regulatory arm for radiocommunication and broadcasting, Industry Canada, is the final approval authority.

Purpose:

7. The *Radiocommunication Act* grants Industry Canada the role, responsibility and authority to be the final approval body for the location of radiocommunication and broadcasting Antenna Systems. Industry Canada procedures allow the Township and the Local Public the opportunity, under specific circumstances, to provide feedback to both Industry Canada and the Proponents of Antenna Systems on proposals, including their proposed locations. Certain circumstances, as established by Industry Canada and replicated in Appendix "A" exempt the Proponent from consulting with the Township or Local Public.
8. The Township's interests, on behalf of its constituents, are to prevent the proliferation and possible negative aesthetics of antenna systems within the Township while at the same time recognizing the business, institutional and consumer demands for such radiocommunication and broadcasting systems. This protocol enunciates what Proponents must consider, under Industry Canada procedures, if they wish to establish or expand Antenna Systems within the Township of Cavan Monaghan.

Further to Proponents in order to satisfy not only Industry Canada requirements, but also the Township's requirements to complete public consultation prior to the approval of an application. The establishment of distance separation criteria, among others, provides the Proponent the opportunity to be considered an Insignificant Antenna System and be exempt from public consultation.

Definitions:

9. Antenna System: A wireless radiocommunication or broadcasting (telecommunication) installation, which may include antennas, masts, towers and other supporting structures, such as guy wires;
10. Designated Official: The Director of Planning, or their designate, as delegated by the Council of the Township of Cavan Monaghan.
11. Insignificant: A proposed Antenna System that is small in size and scope and is deemed to have minimal impact on the Local Public by the Designated Official;

12. Local Public: The inhabitants of nearby residences; businesses; property owners; community gathering areas; public and private institutions; elementary and secondary schools; and, if applicable, neighbouring land-use authorities;
13. Proponent: A company, organization or person that is subject to Industry Canada's "Client Procedure Circular" CPC-2-0-03;
14. Tower Height: A measurement from the tower base or the outside perimeter of the supporting structure, whichever is greater. For the purpose of this requirement, the outside perimeter begins at the furthest point of the supporting mechanisms, be it the outmost guy line, building edge, face of the self-supporting tower, etc.; and
15. Township: The Corporation of the Township of Cavan Monaghan also known as the land-use authority (LUA).

Township Requirements:

16. The Township, in consultation with the Proponent, will ensure public consultation in the locating of wireless Antenna Systems according to the following principles:
 - 16.1. Where reasonably possible, prior to finalizing plans, Proponents of an Antenna System shall consider:
 - 16.1.1. Pre-consulting with the Designated Official of the Township to identify any concerns with the Proponent's search area; and
 - 16.1.2. During this pre-consultation, the Proponent will provide the Township with an Information Checklist (Appendix "C") that will set out the requirements for the application to the Township, recognizing that Proponents of Antenna Systems do not require permitting of any kind from Township, and unless the Proponent is excluded from the requirement to consult in accordance with Section E, herein.
 - 16.2. Having regard to matters of engineering and economics, the following are the Township's preferences for the locating of proposed Antenna Systems:
 - 16.2.1. Review all potential non-tower options;
 - 16.2.2. Review all potential co-location options;

- 16.2.3. Identify Township lands, with or without buildings, which may be suitable for sale or lease for proposed Antenna Systems. The approval of any such sale or lease remains to be at the sole discretion of Township Council;
 - 16.2.4. Investigate new structures on lands owned by private landowners;
 - 16.2.5. Identify lands outside of residentially zoned or residentially designated lands in accordance with the Township's Zoning By-law, as amended, and Official Plan, as amended, respectively, unless the Antenna System is considered as part of a non-tower option; and
 - 16.2.6. Ensure that Antenna Systems will not be located on environmentally sensitive lands (i.e. wetlands, floodplains and steep slopes), and areas of topographical prominence per the Cavan Monaghan Township Official Plan and the Peterborough County Official Plan, as amended.
- 16.3 The Proponent must demonstrate that any lease includes provision for the removal of the tower at the end of the lease period, unless the carrier or owner of the property on which the tower is located, can demonstrate that the tower is required for other purposes. The Proponent will be encouraged to remove the tower, if other, more suitable locations to relocate communications equipment become available. A small plaque must be placed at the base of the tower, identifying the owner/operator of the tower and a contact number.
- 16.4 The Proponent must permit the installation of emergency service telecommunication equipment on the antenna.
17. The Township recognizes that it has no jurisdiction to regulate Antenna Systems under the *Planning Act, 1990*. Despite the jurisdictional issue, when not excluded from the requirement to consult with the land-use authority and the public, the Proponents of Antenna Systems will voluntarily provide drawings and information for the Township's review at a site plan level of detail, together with a justification report in which the proponent will document their site selection process and accompanying rationale and as well as the rationale for the height and built-form of the new Antenna System. Recognizing this is not a site plan application, the Town will not circulate the plan. However, the Proponent will undertake to provide the aforementioned information package to those agencies identified by the Township in its normal circulation.

Exclusions:

18. Industry Canada excludes the Proponent's requirement to consult with the land-use authority and the public for the installation of Antenna Systems in accordance with Section 6, Exclusions, found in Industry Canada's "Client Procedure Circular", CPC-2-0-03 (Appendix "A" – Industry Canada exclusions).
19. The Township is permitted to build upon such exclusions, where it deems appropriate, as follows:
 - 19.1. The Township excludes the Proponent's requirement to consult with the land-use authority and Local Public where an Antenna System is equal to or greater than 15 metres (49 feet, 3 inches) in height and located on lands where the distance radius of three times (3X) the proposed Antenna System's Tower Height does not extend beyond the property on which the Antenna System is to be built.
 - 19.2. Despite Section 19.1, an exemption will continue to be provided to a Proponent whose distance radius of three times (3X) the proposed Antenna System's Tower Height extends beyond the property on which the Antenna System is to be built onto property zoned Commercial, Institutional or Industrial in accordance with the Township's Zoning By-law, as amended, or property designated Commercial, Institutional or Employment in accordance with the Township's Official Plan, as amended.
 - 19.3. The circumstances described within Sections 19.1 and 19.2, herein, are considered to be Insignificant Antenna Systems, as deemed by the Designated Official, if certain criteria are met and, in addition to those exemptions set out by Industry Canada (Appendix "A", herein), such installations will be exempt from the requirements to consult with the land- use authority and the Local Public. The Designated Official will provide written confirmation to the Proponent in this regard.
 - 19.4. The Township requires that the Proponents of Antenna Systems, described in Sections 19.1, consult with the Township and the Local Public if the Antenna System does not meet the minimum distance separation requirements, namely, where the distance radius of three times (3X) the proposed Antenna System's Tower Height extends beyond the property on which the Antenna System is to be built onto property zoned or designated Residential in accordance with the Township's Zoning By-law or the Township's Official Plan, as amended, respectively. The Township will provide the Proponent a list of properties within a distance measured as the radius of three times (3X)

the Tower Height. The Proponent shall provide a notification package, at their cost, delivered to landowners within the above- noted radius to ensure that the affected Local Public is consulted, in accordance with Industry Canada's "Client Procedure Circular", CPC-2-0-03, Appendix 2, (Appendix "B").

Public Input Requirements:

20. The Township requires that the Proponents of Antenna Systems consult with the Township and the Local Public if the Antenna System does not meet the minimum distance separation requirements as described in Section 19.4 or as set out in Section 18. In addition to the details that are to be provided in the notification package, as set out in Appendix "B", to assist in the consultation with the affected Local Public, the Proponent shall make available for public review a colour photograph of the subject property with a superimposed image of the proposed Antenna System portraying both leaf-on and leaf-off perspectives.

Notice to Neighbouring Municipalities:

21. If the proposed Antenna System is located within the distance of three times (3X) the Tower Height from a neighbouring municipality, the Proponent shall notify the affected neighbouring municipality, in writing, of their intent. Such notification will provide 30 days for comment from the neighbouring municipality. For the purposes of this protocol, receipt of the notification package shall mean 5 days after its posting.

Documentation of Public Comments:

22. Industry Canada's "Client Procedure Circular", CPC-2-0-03, Section 4.2, Default Public Consultation Process - Responding to the Public and Public Reply Comments - details the responses required by the Proponent to the public and the public's reply in kind.
23. The Proponent shall document the public consultation process including:
 - 23.1. The names, addresses, phone numbers and E-mail addresses of respondents; and
 - 23.2. The Proponent shall provide a follow-up letter to the Township from indicating the Proponent's formal response to the concerns and/or comments received from the Local Public on the proposal.

24. The Proponent shall obtain the Township's concurrence in writing. In instances where the Proponent has received no objections to the proposal, the Designated Official shall be delegated the power to review and provide a letter of concurrence with the documentation of the public consultation process prepared by the Proponent and forward the Township's concurrence, in writing, to the Proponent and Industry Canada.
25. In instances where the Proponent has received objections to the proposal, the documentation of the public consultation process shall be conducted by the Proponent, reviewed by the Designated Official and presented to Council; thereafter the Designated Official will forward the Township's concurrence or objections, in writing, to the Proponent and Industry Canada.
26. At the conclusion of the public consultation process, if the public and/or the Township have offered comments on the Proponent's plans, such comments shall be discussed with the Proponent. Assuming agreement is reached between the Proponent and the Designated Official, then the Proponent will voluntarily provide the Township with an undertaking to construct the Antenna System in accordance with the information package and the agreed upon modifications. The undertaking will document concurrence between the residents, the Township and the Proponent. Such considerations that may be reviewed, subject to the requirements of Transport Canada and NAV Canada, include:
 - 26.1. Tower type;
 - 26.2. Placement of the tower on the subject lands, recognizing the Proponent's engineering or network requirements and/or the particulars set out in the lease agreement between the Proponent and landowner;
 - 26.3. Tower and base station/equipment shelter colours, preferably neutral to blend into the environment;
 - 26.4. Unobtrusive design of base station/equipment shelter;
 - 26.5. Preservation of existing landscape; and
 - 26.6. Additional landscaping.
27. All of the foregoing shall respect Industry Canada's expectation that consultation will conclude within 120 days.

Implementation:

28. This protocol shall become effective immediately upon approval by the Council of the Corporation of the Township of Cavan Monaghan.
29. Township Council may impose fees for the receipt of comments for the installation of Antenna Systems in accordance with the Township's User Fees and Charges By-law.
30. Township Council delegates the consultation function on Antenna Systems to the Director of Planning, or their designate. The role of the Designated Official is to facilitate discussion and the timely exchange of information between Proponents, the Township and the public, as required.
31. This protocol applies to all committees of Council, Departments and Staff.
32. Township Council may review and amend this protocol as required.

Appendix "A"

Industry Canada "Client Procedures Circular" CPC-2-03, January 2008

Excerpt from Section 6 – Exclusions

For the following types of installations, proponents are excluded from the requirement to consult with the Land-use authority (LUA) and the public, but must still fulfill the General Requirements (Outlined in Section 7 of Industry Canada's "Client Procedure Circular", CPC-2-0-03).

- Maintenance of existing radio apparatus including the antenna system, transmission line, mast, tower or other antenna-supporting structure;
- Addition or modification of an antenna system (including improving the structural integrity of its integral mast to facilitate sharing), the transmission line, antenna-supporting structure or other radio apparatus to existing infrastructure, a building, water tower, etc. provided the addition or modification does not result in an overall height increase above the existing structure of 25% of the original structure's height;
- Maintenance of an antenna system's painting or lighting in order to comply with Transport Canada's requirements;
- Installation, for a limited duration (typically not more than 3 months), of an antenna system that is used for a special event, or one that is used to support local, provincial, territorial or national emergency operations during the emergency, and is removed within 3 months after the emergency or special event; and
- New antenna systems, including masts, towers or other antenna-supporting structure, with a height of less than 15 metres (49 feet, 3 inches) above ground level.

Individual circumstances vary with each antenna system installation and modification, and the exclusion criteria above should be applied in consideration of local circumstances. Consequently, it may be prudent for the proponents to consult the LUA and the public even though the proposal meets an exclusion noted above. Therefore, when applying the criteria for exclusion, proponents should consider such things as:

- The antenna system's physical dimensions, including the antenna, mast, and tower, compared to the local surroundings;
- The location of the proposed antenna system on the property and its proximity to neighbouring residents;
- The likelihood of an area being a community-sensitive location; and
- Transport Canada marking and lighting requirements for the proposed structure.

Proponents who are not certain if their proposed structure is excluded, or whether consultation may still be prudent, are advised to contact the land-use authority and/or Industry Canada for guidance.

Appendix “B”

Industry Canada “Client Procedures Circular” CPC-2-0-03 (Appendix 2), January 2008 Public Notification Package

Industry Canada’s “Client Procedure Circular”, CPC-2-0-03 public notification package must include, but need not be limited to:

1. The purpose of the Antenna System, the reasons why existing antenna systems or other infrastructure cannot be utilized, a list of other structures that were considered unsuitable and future sharing possibilities for the proposal;
2. The proposed location and key map of the proposed Antenna System in the community;
3. An attestation that the general public will be protected in compliance with Health Canada’s Safety Code 6, including combined effects within the local radio environment, at all times;
4. Areas for public access and/or the control of public access to the Antenna System;
5. The project’s status under the *Canadian Environmental Assessment Act*;
6. A description of the proposed Antenna System including height, dimensions, a description of any antenna that may be mounted on the supporting structure and simulated images of the proposal;
7. Transport Canada’s aeronautical obstruction marking requirements, whether painting, lighting or both, if required;
8. An attestation that the installation will respect good engineering practices including the structural adequacy of the proposed Antenna System;
9. Reference to any applicable local land-use requirements such as local processes, protocols, etc.;
10. Notice that information relating to Antenna Systems is available on Industry Canada’s, Spectrum Management and Telecommunications, website and citing the same;

11. Contact information for the Proponent and/or their Agent, the Town's Designated Official and the local Industry Canada office; and
12. The closing date for the submission of written comments shall be not less than 30 days from receipt of the notice. For the purposes of this protocol, receipt shall mean 5 days after posting of the notification package.

Appendix “C”

Application for the Establishment of an Antenna System Information Checklist

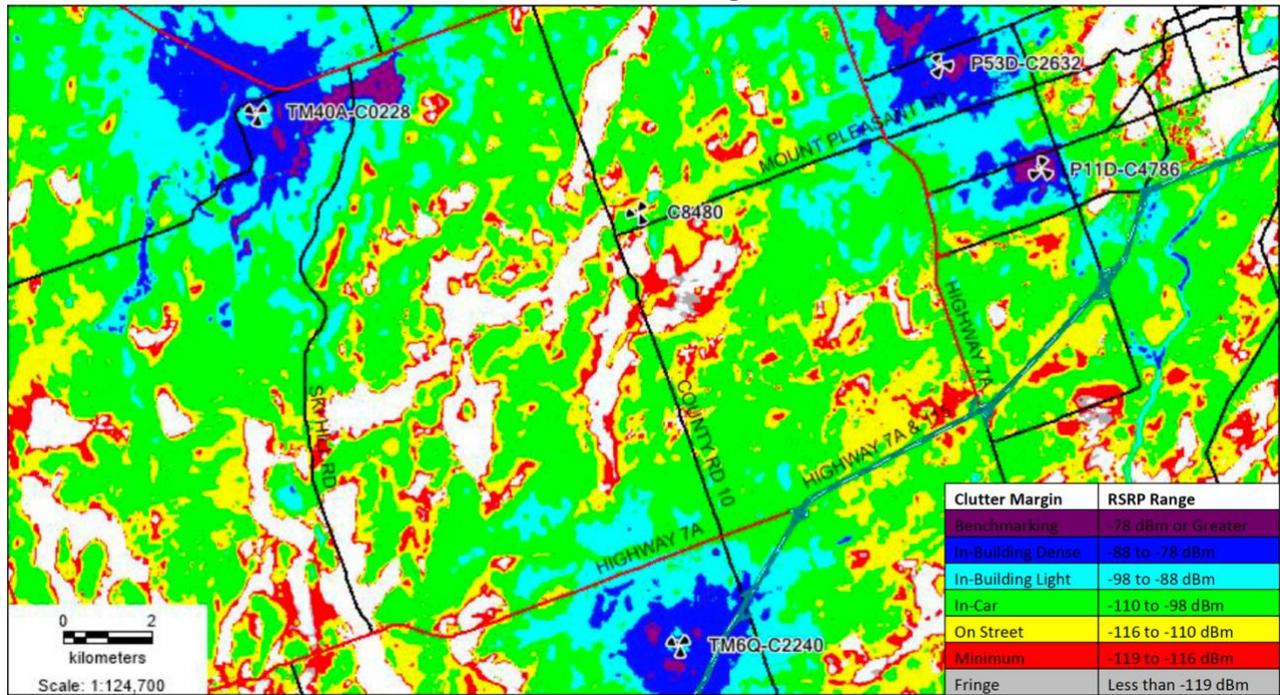
Where a proponent is not excluded from the requirement to consult with the land-use authority and the public, then proposed new installations or modifications of Antenna Systems require the submission of an application where consultation is required with the Township of Cavan Monaghan and the affected public. Such consultation is required by Industry Canada and the information gathered will expedite any approvals sought by the Proponent of the Antenna System.

1. Written documentation from the Proponent outlining their steps taken to investigate all non-tower and co-location options, demonstrating why the site for the erection of a new Antenna System tower is the preferred alternative for the Proponent.
2. If a new Antenna System option is the only viable alternative, then the Proponent shall provide an analysis of the other possible sites considered and provide a description as to why the alternative sites were not preferred.
3. A pre-consultation meeting with the Township’s Designated Official is strongly encouraged to share mutual local knowledge from the Township’s officials and, at the same time, share the technical needs of the Proponent.
4. A site plan, drawn to an acceptable scale, showing the subject property owned by the Proponent or, alternatively, indicating the leased area of land the Proponent will be utilizing; site grading, the location of existing property line; the location of existing or proposed buildings and structures; fences; existing vegetation; proposed vegetation through additional landscaping; and parking access. Furthermore, the site plan should indicate, in profile, the type and height of the tower.
5. Two sets of stamped engineer’s drawings depicting the tower’s design.
6. A statement from the Proponent to indicate the need for the proposed tower’s height.
7. A map indicating the horizontal distance between the tower and the nearest lands zoned residential; designated residential; the nearest environmentally sensitive lands, including wetlands.

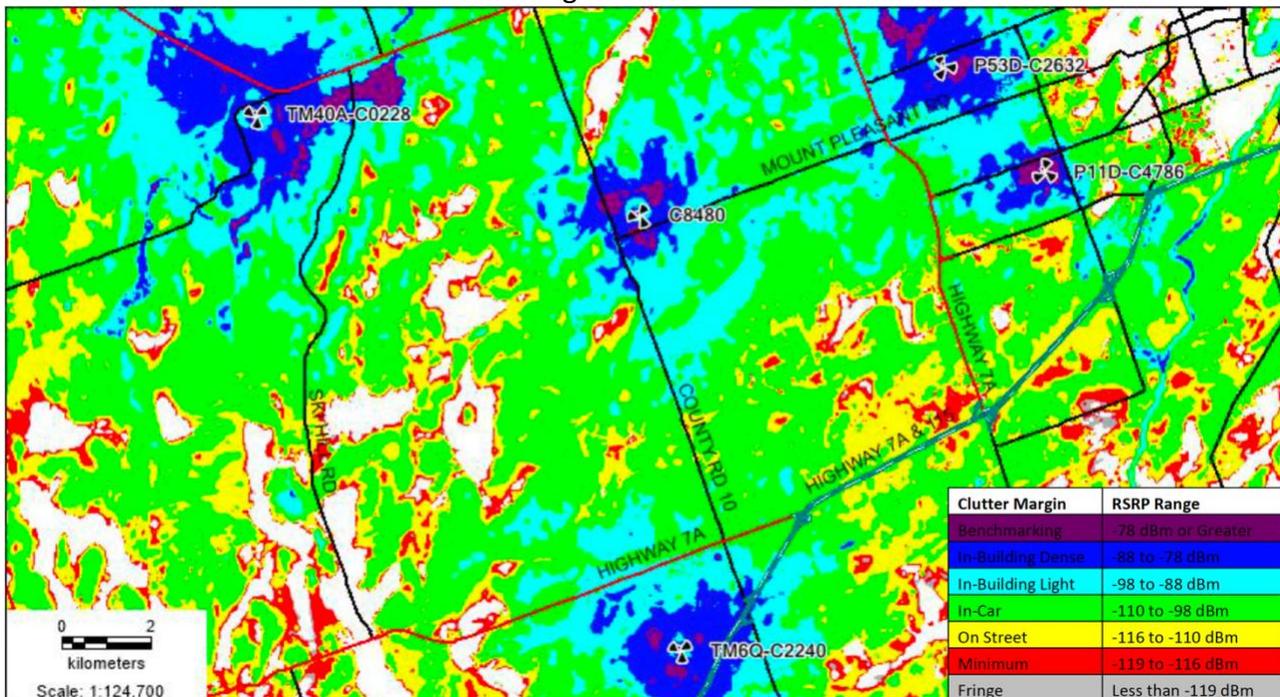
Attachment No. 2: Coverage Plot

Rogers C8480 – Coverage Plots

Current Coverage



Coverage After Installation







Regular Council Meeting

To:	Mayor and Council
Date:	December 18, 2023
From:	Wayne Hancock, Director of Public Works
Report Number:	Public Works 2023-26
Subject:	Former Millbrook Correctional Facility Groundwater Investigation

Recommendation:

That Council receive Public Works Report No. 2023-26 Former Millbrook Correctional Facility Groundwater Investigation for information.

Overview:

Staff have been reporting to Council for several years in order to provide them with an update on well testing results at the former Millbrook Correctional Facility on groundwater. Township Staff and Council consider these test results critical due to close proximity to our municipal wells. Staff have been meeting with Ministry of Environment, Conservation, and Parks Representatives to discuss these present test results and future testing requirements that will continue to be required on the IO lands. Staff have been trying to schedule a meeting in 2023 however given some staff changes at the Ministry it will not take place until early 2024.

Background Information:

The Province of Ontario manages the lands that make-up the former Millbrook Correctional Facility (Site) on County Road 21 on the western extent of Millbrook. Infrastructure Ontario (IO), a government corporation that reports to Ontario's Minister of Infrastructure, manages the Site and all contracts related to its demolition and environmental works. The facility was closed in 2003 and the buildings were demolished in 2015. In preparation for demolition, the Site was investigated for potential contamination through a process that paralleled the Record of Site Condition (RSC) process, a regulatory process provided by the Ministry of Environment, Conservation, and Parks (MECP) (O.Reg 153/04).

Historical investigations at the Site indicate that there are three main hydrogeological strata at the site. The uppermost, Layer 1, is an unconfined water table aquifer. Layer 2, the intermediate layer, is an aquitard that holds water in the water table (Layer 1) above by restricting downward movement while also confining the lower unit (Layer 3) by restricting the upwards movement of water. Layer 3 is the lower confined aquifer. The aquifers (Layers 1 and 3 – geological units in the subsurface that allow movement of

water through their pore space) are predominantly sands of varying grain size with some silts and gravel. The aquitard (Layer 2 - a geological unit in the subsurface that restricts the movement of groundwater given its soil texture) is predominantly clay with silts and stones. The direction of groundwater flow in Layer 3 is towards the east and southeast. The Millbrook Municipal Supply Wells pump water from Layer 3 and are located southeast of the former correctional facility site.

As outlined below, contamination has been reported historically in both the Layer 1 and Layer 3 aquifers. Further discussion regarding Site conditions/monitoring is outlined in the following section.

Current Site Conditions

Previous investigations at the Site indicated that there are elevated concentrations of tetrachloroethene (PCE) in the southern portion of the property. Based on the groundwater levels measured, the groundwater flow is in a southeasterly/southerly direction. Down gradient properties include single-family residential dwellings and the municipal water supply well field for Millbrook. An environmental monitoring program has been initiated by IO and includes groundwater sampling at the Site on a quarterly basis, the results of which are summarized in an annual report.

IO intends to sell the Site, and their present goal is to reduce their liability and provide a future owner with information about the risks associated with on-site contamination. IO indicated that the timing of offering the site for disposition is yet to be determined depending on the result of the continued environmental monitoring.

With regards to the eventual surplus sale of the lands, IO indicate that the circulation of the property (referred to as Stages 1 and 2) to other ministries and agencies has been completed; and they have re-confirmed that the property is indeed surplus to provincial needs. However, IO has not initiated what they refer to as Stage 3 Circulation, in which other levels of government (including the local municipality), not for profit organizations, eligible indigenous groups and other entities in the broader public sector are offered the property at fair value. Without having a specific timeline figured out as to when provincial responsibility for the site will be completed, IO stated that it is difficult to target when the Stage 3 Circulation will begin.

The most recent environmental monitoring program at the Site was initiated between May 2022 and March 2023. The results of the most recent environmental monitoring program are summarized on a report dated May 26, 2023¹. The findings of GHD's most recent report are summarized below:

1. The inferred groundwater flow direction at the Site is in a general southeasterly direction in Layer 1 and a southern direction in Layer 3. The groundwater flow direction is generally consistent with previous monitoring events.
2. PCE was detected at concentrations above the 2011 Table 2 Generic Standard in groundwater samples collected from monitoring well MW3-14 (2.91 micrograms per litre [µg/L] in May 2022, 2.17 µg/L in August 2022, and 2.47/2.24

¹ GHD Limited, 2022-2023 *Groundwater Monitoring Report, N-00596 Former Millbrook Correctional Centre, 706 County Road 21, Millbrook, Ontario, (May 26, 2023)*

µg/L in December 2022) screened in Layer 3. The detected PCE concentrations were less than the ODWQS (10 µg/L). PCE was consistently detected in monitoring well MW3-14 between 2014 and 2020.

3. Based on the Mann-Kendall trend test, there are statistically-significant decreases in PCE concentrations at MW3-14 and MW6-16-1. At MW1-14 and MW5-15-5&6, there are no statistically significant PCE concentration trends suggesting that concentrations are stable at these locations.
4. Trichloroethene (TCE) was detected in the groundwater samples collected from MW1-14 (1.65 µg/L/1.66 µg/L) on August 22, 2022, above the 2011 Table 2 Generic Standards (1.6 µg/L). MW1-14 is screened in Layer 1 and is located in the vicinity of the former facility. TCE was not previously detected at MW1-14 during previous sampling events prior to August 2022 and was not detected in the December 2022 to March 2023 sampling events. Further monitoring is required to confirm TCE concentrations.
5. Based on the analytical results for the groundwater sampling activities undertaken between 2011 and 2023, there is a decreasing trend in PCE concentrations. The detected PCE concentrations have been consistently below the ODWQS (10 µg/L). Based on this, it is recommended that the sampling frequency be reduced from quarterly to semi-annually for the upcoming monitoring period.

Cambium completed a peer review of GHD's most recent annual monitoring report and provided comments in a letter dated July 14, 2023². Cambium's peer review comments are summarized below:

1. Further clarification is sought as to the distance of the Millbrook municipal supply well field to the nearby southern boundary of the Site. Section 2.1 of the report states that the municipal wells are 25 m from the boundary, whereas Section 2.2 that the well field is approximately 100 m from the boundary. Please confirm the distance between the closest Site boundary and the Millbrook municipal supply well field.
2. Upon reviewing Table 3, which was provided appended to the report, Cambium does note that field turbidity readings were very high (1,000 NTU +) for many sampling events and at various monitoring wells. The turbidity also fluctuated significantly between sampling events at many wells. A discussion of the turbidity results should be provided.
3. It is noted that the concentration of trichloromethane (chloroform) was detected and exceeded Table 2 criteria at MW17 (Layer 3) during the May 2022 sampling event. This exceedance was not discussed within the 2022/2023 groundwater report.
4. Chloroform exceedances were reported from multiple monitoring well locations over the course of the monitoring program. However, chloroform was not discussed in the report as a potential contaminant.
5. Cambium agrees that ongoing monitoring is required to determine whether the exceedance of TCE at MW1-14 was anomalous.
6. PCE is the main contaminant of concern for the municipal supply wells and it has been demonstrated that concentrations of this parameter are decreasing in some wells as per the Mann-Kendall trend tests. However, due to the recent TCE

² Cambium Inc., *Peer Review – 2022-2023 Groundwater Monitoring Report, N-00596, Former Millbrook Correctional Centre, 706 County Road 21, Millbrook, Ontario, (July 14, 2023)*

detection at well MW1-14, Cambium cannot support the proposed monitoring program reduction. The monitoring program should continue as normal (quarterly sampling) for one more year to confirm the presence or absence of TCE. After which proposed reductions can be considered.

Municipal Supply Well Sampling

The Millbrook Municipal Supply Wells have been sampled quarterly in 2017, 2018 in 2019 by the MECP. The sampling included raw water samples retrieved from each of the three wells that supply drinking water to the Millbrook serviced area. None of the sampling reported detectable levels of Perchloroethylene (PCE) in the groundwater (the contaminant found in groundwater at the former correctional facility).

Through 2020 -2022 testing was completed semi-annually. More recently the MECP sampled the Millbrook Municipal Supply Wells on March 1, 2023 and August 22, 2023. No parameters (which includes the primary contaminant of concern – PCE - which is also referred to as its chemical synonyms ‘Tetrachloroethene’ or ‘Tetrachloroethylene’) were detected in any of the municipal well water samples or the field blank sample. However, during the August sampling event, it is noted that four trihalomethane (THM) compounds were detected in the laboratory's QC (quality control) method blank sample. The MECP indicates that these detections are due to the source of the water (the laboratory's municipal water supply) that was used for the sample and do not affect the results for the municipal wells samples.

Summary of Recent Information

The most recent annual monitoring report prepared by GHD indicates that conditions at the Site are stable and or steadily improving. Based on this, GHD recommended that the sampling frequency be reduced from quarterly to semi-annually for the upcoming monitoring period.

Cambium generally agreed with GHD's interpretation of the Site, however there were some minor items that should be addressed (as per the peer review letter report, summarized above). The main point which Cambium disagreed with GHD on was the proposed reduction of the annual monitoring program. Due to the recent TCE detection at well MW1-14, Cambium cannot support the proposed monitoring program reduction. The monitoring program should continue as normal (quarterly sampling) for one more year to confirm the presence or absence of TCE. After which proposed reductions can be considered.

The most recent sampling event at the Millbrook Municipal Supply Wells was in August of 2023. The supply wells continue to not report the presence of any contamination. Cambium recommends that the supply wells continue to be sampled on an annual basis.

Financial Considerations

The Township has hired Cambium Inc. to complete a peer review of all test results on the IO wells and on the municipal wells. The estimated annual cost is \$ 5,000.00 which is included in the Township Annual Water/Wastewater Budget.

Attachments:

Attachment # 1 – GHD Limited, 2022-2023 Groundwater Monitoring Report, N-00596 Former Millbrook Correctional Centre, 706 County Road 21, Millbrook, Ontario, (May 26, 2023)

Attachment # 2 – Cambium Inc., Peer Review – 2022-2023 Groundwater Monitoring Report, N-00596, Former Millbrook Correctional Centre, 706 County Road 21, Millbrook, Ontario, (July 14, 2023)

Respectfully Submitted by,

Reviewed by,

Wayne Hancock
Director of Public Works

Yvette Hurley
Chief Administrative Officer



2022-2023 Groundwater Monitoring Report

N-00596 Former Millbrook Correctional Centre, 706
County Road 21, Millbrook, Ontario

Infrastructure Ontario

26 May 2023

Executive Summary

GHD Limited (GHD) was retained by Infrastructure Ontario (IO) to undertake a groundwater monitoring program at the Former Millbrook Correctional Centre (herein referred to as the “Site” or “Property”) located at 706 County Road 21, in Millbrook, Ontario. The Site is approximately 1.4 kilometres west of the Village of Millbrook and the former facility was demolished in 2015.

Based on previous investigations, the groundwater at the Site has elevated concentrations of tetrachloroethene (PCE) in the southern portion of the property. Based on the groundwater levels measured, the groundwater flow is in a southeasterly/southerly direction. Downgradient properties include single-family residential dwellings and a municipal water supply well field. The Millbrook municipal water well is owned by the Township of Cavan Monaghan, operated by the City of Peterborough, and services a population of approximately 2,195.

Four groundwater sampling events were undertaken between May 2022 and March 2023. Groundwater samples and water levels were collected in summer (May 2022), fall (August 2022), and winter (December 2022 and March 2023). Based on the Site conditions, the results were assessed to the Ministry of the Environment, Conservation and Parks (MECP) Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Coarse Texture Soil are applicable (2011 Table 2 Generic Standards¹). Due to the proximity of the Millbrook municipal water well field, and for reference only, analytical results were also compared to the Ontario Drinking Water Quality Standards (ODWQS).

Based on the findings of the 2022-2023 groundwater sampling and monitoring activities undertaken by GHD, the following conclusions are provided.

- 1) The inferred groundwater flow direction at the Site is in a general southeasterly direction in Layer 1 and a southern direction in Layer 3. The groundwater flow direction is generally consistent with previous monitoring events.
- 2) PCE was detected at concentrations above the 2011 Table 2 Generic Standard in groundwater samples collected from monitoring well MW3-14 (2.91 micrograms per litre [µg/L] in May 2022, 2.17 µg/L in August 2022, and 2.47/2.24 µg/L in December 2022) screened in Layer 3. The detected PCE concentrations were less than the ODWQS (10 µg/L). PCE was consistently detected in monitoring well MW3-14 between 2014 and 2020.
- 3) Based on the Mann-Kendall trend test, there are statistically-significant decreases in PCE concentrations at MW3-14 and MW6-16-1. At MW1-14 and MW5-15-5&6, there are no statistically significant PCE concentration trends suggesting that concentrations are stable at these locations.
- 4) Trichloroethene (TCE) was detected in the groundwater samples collected from MW1-14 (1.65 µg/L/1.66 µg/L) on August 22, 2022, above the 2011 Table 2 Generic Standards (1.6 µg/L). MW1-14 is screened in Layer 1 and is located in the vicinity of the former power plant. TCE was not previously detected at MW1-14 during previous sampling events prior to August 2022 and was not detected in the December 2022 and March 2023 sampling events. Further monitoring is required to confirm TCE concentrations.

Based on the analytical results for the groundwater sampling activities undertaken between 2011 and 2023, there is a decreasing trend in PCE concentrations. The detected PCE concentrations have been consistently below the ODWQS (10 µg/L). Based on this, it is recommended that the sampling frequency be reduced from quarterly to semi-annually for the upcoming monitoring period.

¹ “Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act”, dated April 15, 2011.

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1. Introduction

GHD Limited (GHD) was retained by Infrastructure Ontario (IO) to undertake a groundwater monitoring program at the Former Millbrook Correctional Centre (herein referred to as the “Site” or “Property”) located at 706 County Road 21, in Millbrook, Ontario. The Site is approximately 1.4 kilometres west of the Village of Millbrook. The Site location is presented on **Figure 1**.

Several environmental investigations were completed at the Site since 2011. Based on previous investigations, the groundwater at the Site has elevated concentrations of tetrachloroethene (PCE) in the southern portion of the property. Based on the groundwater levels measured, the groundwater flow is in a southeasterly/southerly direction. Four groundwater sampling events were undertaken between May 2022 and March 2023. Groundwater samples and water levels were collected in summer (May 2022), fall (August 2022), and winter (December 2022 and March 2023).

The objectives of the 2022-2023 groundwater monitoring and sampling program are to:

- Determine groundwater quality trends and fluctuations with respect to historical data.
- Assess the potential for groundwater impacts to migrating off-Site.
- Establish seasonal groundwater elevation fluctuations and direction.

2. Background

2.1 Site Description and Physical Setting

The Site is approximately 42.8 hectares (105.8 acres) in size and consists of vacant, grass-covered fields and a circular paved road. The Property was formerly occupied by the Millbrook Correctional Center from 1957 until 2003. The facility was formally decommissioned/demolished in 2015. The Property is located on a drumlin, and a steep ravine is located directly north of the former detention complex, which leads to a tributary of Baxter Creek within the Otonabee Watershed.

The former Millbrook Correctional Centre consisted of a detention center and multiple administrative buildings, which were generally constructed of concrete blocks with slab-on-grade concrete floors and were connected by paved roadways. Potable water wells located on the Property serviced the former buildings with water, and sewage lagoons located in the ravine north of the former correctional center serviced the Site until it was connected to the municipal wastewater system in the 1980s. Stormwater was managed through overland flow towards lower-lying areas, and runoff is collected through catch basins drained to the Baxter Creek tributary and/or a municipal inlet to the southeast.

The Site decommissioning activities in 2015 included removing all on-Site buildings and structures, decommissioning on-Site water wells and septic systems, decommissioning and remediation of the lagoons, and targeted removal of debris and impacted soils.

The elevation at the Site is approximately 270 metres above mean sea level (mAMSL) in the area of the demolished buildings and there is a considerable decrease in elevation to 247 mAMSL (MW2-14) to 253 mAMSL (MW3-14) at the property boundary. South of the Site is the Millbrook municipal water well which is approximately 25 metres (m) south of the southern Site boundary and is owned by the Township of Cavan Monaghan, operated by the City of Peterborough, and services a population of approximately 2195. Single-family residential dwellings are located further south and are at an estimated elevation ranging between 240 mAMSL and 250 mAMSL.

2.2 Conceptual Geologic and Hydrostratigraphic Model

Based on the previous investigations undertaken at the Site, the Site is underlain by the following geologic deposits in descending order:

- **Layer 1 (Oak Ridges Moraine/ Unconfined Sands):** comprising of sands and silts. This deposit extends from the ground surface and extends to approximately 9.6 metres below the ground surface (mBGS; 237.40 mAMSL) at MW2-14 and 17.1 mBGS (235.91 mAMSL) at MW3-14.
- **Layer 2 (Upper Newmarket till/Clay Aquitard):** comprising of grey, hard clay underlying Layer 1. This layer occurs between 9.6 mBGS (237.40 mAMSL) and 14.5 mBGS (232.55 mAMSL) at MW2-14, and 17.1 mBGS (235.91 mAMSL) and 22.5 mBGS (230.53 mAMSL) at MW3-14.
- **Layer 3 (Inter-Till Sediments/Confined Sands):** comprising of fine to coarse sand underlying Layer 2. This layer occurs between 14.5 (232.55 mAMSL) mBGS and 18.8 mBGS (228.18 mAMSL), overlying gravel to the end of the borehole at 19.1 mBGS (227.93 AMSL) at MW2-14. Fine to coarse sand was encountered from 22.5 mBGS (230.53 mAMSL) to the end of the borehole at 26.9 mBGS (226.11 mAMSL) at MW3-14. This deposit may be less regionally extensive.

The Site hydrostratigraphy is as follows:

- **Layer 1 (Oak Ridges Moraine):** Regionally extensive unconfined aquifer composed of sand and silt, with some interbedded sands and gravels. This surficial aquifer has a high infiltration rate where not overlain by fine-grained or low-permeability materials.
- **Layer 2 (Upper Newmarket Till):** Regionally extensive aquitard composed of dense glacial till. This unit has low vertical hydraulic conductivity.
- **Layer 3 (Inter-Till Sediments):** confined aquifer composed of sand to silty sand, with high local hydraulic conductivity.

The Site is located in the Trent Conservation Protection Region, part of the Otonabee-Peterborough Well Head Protection Area (WHPA). A municipal water supply well field operated by the City of Peterborough is located approximately 100 m from the southern boundary of the Site. This well is screened within the confined aquifer system in Layer 3. This well is operated by the City of Peterborough and serves a population of approximately 2195.

The following WHPAs are associated with this municipal well:

- WHPA-A: the surface area within a 100 m radius of the municipal water well
- WHPA-B: the surface area within a 2-year Time of Travel (ToT)
- WHPA-C: the surface area within a 2 to 5-year ToT

As noted in the Millbrook Municipal WHPA², a minor portion of the Site along the southeast corner is located within the WHPA-A: the surface area within a 100 m radius of the water well. Monitoring well MW2-14 located in the southeast corner is near the WHPA-A boundary.

2.3 Previous Environmental Investigations

Groundwater monitoring has been ongoing at the Site since 2011. Results from the monitoring activities have indicated the presence of PCE in groundwater, likely related to the historical use of chlorinated solvents at the Site. Monitoring wells were installed at the Site between 2011 and 2017 by consultants to investigate the PCE impacts. Although extensively investigated, the source for the PCE is not known, but potential sources include:

- Jobbing Shop / Tailor Shop and License Plate Manufacturing
- Laundry and Dry Cleaning

² Millbrook Municipal WHPA – Revised Oct 2021
(<https://trentsourceprotection.on.ca/images/pdfs/our-watersheds/otonabee-peterborough/Millbrook.pdf>)
(https://trentsourceprotection.on.ca/images/assessment-reports/Trent/Trent_AR_Report_Maps_Chapter_5_25a-27c.pdf)

– Shipping / Receiving

The monitoring wells installed at the Site consist of individual 38-millimeter (mm) [1.5-inch] and 50 mm diameter (dia.) [2-inch] monitoring wells, nested 25 mm dia. [1-inch] MWs and Solinst Continuous Multichannel Tubing (“CMT Multilevel Systems™” or “CMT”) wells.

The following table summarizes the CMT and non-CMT monitoring wells installed and the number of screened intervals observed in each of the hydrogeologic layers detailed in Section 2.1. A Site plan showing the site details and the investigation locations is shown on **Figure 2**.

Well ID	Installation Year	Type of Well	No. of Screens/Ports	Screened Geology – Layer 1 (Unconfined Sand)	Screened Geology – Layer 2 (Clay Aquitard)	Screened Geology – Layer 3 (Confined Sand)
MW17	2011	MW	1	1	-	-
MW22	2011	MW	1	1	-	-
MW37	2011	MW	1	1	-	-
MW1-14	2014	MW	1	1	-	-
MW2-14	2014	MW	1	-	-	1
MW3-14	2014	MW	1	-	-	1
MW4-15	2015	CMT	7	1	2	4
MW5-15	2015	CMT	7	1	2	4
MW6-16-ports 1/2/3	2016	MW	3	-	-	3
MW17- ports 1/2	2017	MW	2	-	-	2
Total			25	6	4	15
Note: Well MW32 was decommissioned in 2017 and contained one screening port screened in Layer 1.						

There is evidence of PCE impacts in Layer 1 (Oak Ridges Moraine) with very low PCE impacts having been detected periodically at MW1-14 (located centrally on-Site). The concentrations detected have been consistently below the Ontario Drinking Water Quality Standard (ODWQS; 10 micrograms per litre [$\mu\text{g/L}$]). Groundwater flow in this unconfined aquifer (Layer 1) is from west-southwest to east-southeast.

Layer 1 is underlain by a clay aquitard (Layer 2). The presence of PCE impacts (see below) in Layer 3, however, suggests there may be leakage of groundwater from Layer 1, through Layer 2, to Layer 3.

However, the presence of PCE impacts in Layer 3, suggests there may be leakage of groundwater from Layer 1, through Layer 2, to Layer 3. PCE impacts are consistently present at MW3-14 located along the eastern Site boundary, but concentrations in groundwater samples collected at directly adjacent wells MW2-14 and MW4-15 (port 4 screened in Layer 2 and port 5/6/7 screened in Layer 3) have consistently been non-detect. PCE has been detected less frequently and only occasionally exceeds the applicable SCS at MW6-16-1 located downgradient of the main complex’s southeast corner. PCE concentrations exceeding the 2011 Ministry of the Environment, Conservation and Parks (MECP) Table 2 Generic Standards are occasionally found in Layer 3 at MW5-15.

Soil vapour probes were installed at the Site in June 2020 along the eastern and southeastern property boundaries at those locations where PCE concentrations were above the applicable Table 2 Generic Standard. All soil vapour samples collected during the two sampling events in 2021 and 2022 (August 2021 and January 2022) and the four previous sampling events (June 2020, August 2020, October 2020, and January 2021) had PCE concentrations ranging between 1.4 micrograms per cubic metre ($\mu\text{g/m}^3$) and 106 $\mu\text{g/m}^3$, which were well below the MECP residential

(214 µg/m³) and industrial (3,438 µg/m³) Site-specific soil vapour criteria for PCE. The soil vapour analytical results were compared to the soil vapour criteria, which were calculated by dividing the Human Health Indoor Air Criteria (obtained from the MECP's Modified Generic Risk Assessment model, updated November 1, 2016), by the appropriate attenuation factors for industrial and residential land use.

3. Scope of Work

GHD completed the following activities between May 2022 and March 2023.

- Collection and laboratory analysis of groundwater samples from non-CMT monitoring wells (MW17, MW22, MW37, MW1-14, MW2-14, MW3-14, MW6-16-1/2/3, and MW17-1/2) using Waterra™ electric hydrolift pump and Waterra™ inertial lift foot valve sampling technique.
- Collection and laboratory analysis of groundwater samples from CMT monitoring wells (MW4-15 and MW5-15) using low flow using a Micro Dual Valve pneumatic pump.
- Collection of groundwater level measurements from all monitoring wells to confirm groundwater flow direction.
- Collection of groundwater samples for analysis of VOCs.
- Collection of field duplicate groundwater samples for every ten groundwater samples collected and analysis of these samples for VOC for Quality Assurance/Quality Control (QA/QC) purposes. Laboratory-supplied trip blanks (one per laboratory submission) were also submitted for chemical analysis of VOCs.

4. Field Methodology

4.1 General

During all field activities, GHD implemented a Site-Specific Health and Safety Plan (HASP). The purpose of the HASP was to provide specific guidelines and established procedures for the protection of personnel performing the Site investigation activities.

4.2 Groundwater Elevations

GHD measured the depth to groundwater in the monitoring well locations on May 19, 2022, August 22-23, 2022, December 06, 2022, and March 01-02, 2023. Groundwater levels were collected using a calibrated interface probe and measured relative to a specific reference point in the monitoring well (i.e., top of the monitoring well riser pipe). A summary of the elevation survey information, depth to groundwater, and calculated groundwater elevations are included in **Table 2**.

4.3 Groundwater Sampling

Four groundwater sampling events were undertaken between May 2022 and March 2023. Groundwater samples and water levels were collected in summer (May 2022), fall (August 2022), and winter (December 2022 and March 2023). Groundwater samples were collected using the following protocol after well development:

- Low-flow sampling techniques using a dual valve peristaltic pump and/or an electric lift pump at a rate of approximately 100 to 200 millilitres per minute (mL/min) were used to limit the draw-down of the water column and to reduce sediment agitation and mobilization.

- Field measurements of temperature, pH, turbidity, electrical conductivity (EC), oxidation-reduction potential (ORP), and dissolved oxygen (DO) were taken every five minutes using a Horiba water quality meter to monitor for stabilization of water quality parameters.
- Once field parameters stabilized, groundwater samples were collected using dedicated low-density polyethylene (LDPE) tubing. At select locations, parameters could not be stabilized due to low recharge.
- Samples were collected in laboratory-supplied sample containers specific to the analytical parameters, stored in coolers chilled with ice, and submitted under the chain of custody protocol for analysis.

A sample identification key is provided with field parameter measurements in **Table 1**. A summary of well-sampling data is presented in **Table 3**.

Groundwater samples were submitted to ALS Laboratory Group (ALS), a Canadian Association for Laboratory Accreditation Inc. (CALA) certified laboratory, for chemical analysis of VOCs. Field duplicate groundwater samples and laboratory-supplied trip blanks were also submitted to ALS for QA/QC purposes. The trip blanks were submitted for VOC analyses.

The 2022-2023 monitoring and historical groundwater analytical data are presented in **Table 4**.

4.4 Residue Management

Purge water generated during the 2022-2023 field activities was containerized in 205-litre drums for interim storage on-Site.

4.5 Quality Assurance and Quality Control Measures

A quality assurance/quality control (QA/QC) program was implemented during the groundwater sampling event to ensure quality data was generated.

For quality assurance, the following was undertaken during field activities.

- Field duplicate groundwater samples and laboratory-supplied trip blanks.
- Use of dedicated tubing for sample collection in each well.
- Between the collection of each groundwater sample, GHD field personnel donned a new pair of disposal nitrile gloves.
- Samples were collected in laboratory-supplied sampling containers with the appropriate preservatives, where required.
- Samples were submitted under the chain of custody protocol to an analytical laboratory for chemical analysis.
- From shortly after the time of collection to the time of submission to the laboratory, groundwater samples were stored on ice in a cooler to maintain sample integrity.
- All field equipment was cleaned using an Alconox® and distilled water mixture between each well location.

A minimum of one QA/QC duplicate sample was collected per every 10 samples for each analytical parameter per media type and submitted for laboratory analysis to validate the field analysis. QA/QC samples also included trip blank samples (one per laboratory submission) for VOCs.

All samples were submitted to the analytical laboratory following chain of custody procedures. The chain of custody forms document sample condition and handling throughout the collection, transportation, and final analysis of the samples.

5. Results and Discussion

5.1 Applicable Site Condition Standards

The analytical results were assessed to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Coarse Texture Soil are applicable (2011 Table 2 Generic Standards³) at the Site.

Due to the proximity of the Millbrook municipal water well field which draws groundwater from Layer 3, the analytical results were also compared to the ODWQS⁴ for reference purposes only.

5.2 Groundwater Flow Direction

Groundwater Elevation Contours and Flow Direction

The depth to groundwater and groundwater elevations are presented in **Table 2**. The groundwater elevation contours for the water levels collected on March 01-02, 2023, from Layer 1 and Layer 3 are presented in **Figure 3a** and **Figure 3b**, respectively. Based on the groundwater levels measured, the groundwater flow direction at the Site is in a southeasterly direction in Layer 1 and a southern direction in Layer 3. The groundwater flow direction is generally consistent with previous monitoring events.

Horizontal Hydraulic Gradients

The horizontal hydraulic gradients in Layer 1 and Layer 3 were determined based on the contoured groundwater elevations for groundwater level measurements collected in March 2023. Horizontal hydraulic gradients were approximately 0.025 m/m to the south/southeast in Layer 1 and approximately 0.026 m/m to the south in Layer 3.

5.3 Groundwater Analytical Results

The 2022-2023 groundwater monitoring and historical analytical data are presented in **Table 4a** through **Table 4c**, and the laboratory certificates of analysis are provided in **Appendix A**.

Tetrachloroethene (PCE)

PCE concentrations were below the applicable 2011 Table 2 Generic Standard (1.6 µg/L) in all groundwater samples collected from the monitoring wells screened within Layer 1 and Layer 2 during all sampling events. PCE was detected at concentrations above the 2011 Table 2 Generic Standard in groundwater samples collected from monitoring well MW3-14. The groundwater analytical data from the four sampling events were also compared to historical PCE groundwater data for the Site.

Based on this comparison, the following conclusions were drawn.

- **Layer 1 (Unconfined Sand):** PCE concentration has consistently been non-detect within Layer 1. These results are consistent with historical groundwater data.
- **Layer 2 (Clay Aquitard):** PCE concentrations have consistently been non-detect within Layer 2. These results are consistent with historical groundwater data.
- **Layer 3 (Confined Sand):** PCE was detected at concentrations above the 2011 Table 2 Generic Standard in groundwater samples collected from monitoring well MW3-14 (2.91 µg/L in May 2022, 2.17 µg/L in August 2022, and 2.47/2.24 µg/L in December 2022). The detected PCE concentrations were less than the ODWQS (10 µg/L). PCE was consistently detected in monitoring well MW3-14 between 2014 and 2020.

³ "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011.

⁴ Ontario Drinking Water Quality Standard

PCE results are presented on **Figure 4a** and **Figure 4b**. A geologic cross-section with the PCE concentration trends is presented on **Figure 5**.

Trichloroethene (TCE)

TCE was detected at MW1-14 (1.65 µg/L/1.66 µg/L) on August 22, 2022, above its applicable Table 2 Standard (1.6 µg/L). MW1-14 is screened in Layer 1 and is located in the vicinity of the former power plant. TCE was not previously detected at MW1-14 during previous sampling events prior to August 2022 and was not detected in the December 2022 and March 2023 sampling events.

A QA/QC of the analytical results was completed by the laboratory which concluded no transcription errors were made and the lab chemist reviewed the integrations and confirmed the compound with the detection was TCE. Further monitoring is required to confirm TCE concentrations.

5.4 Mann-Kendall Trend Analysis

The Mann-Kendall trend test was applied for PCE data sets with sufficient detected values over time to permit testing. This occurred for PCE at four wells (MW1-14, MW3-14, MW5-15-5&6, and MW6-16-1). The trend tests included results available for samples collected between November 2014 and March 2023 (varying by well). The Mann-Kendall trend test requires that sampling frequencies be consistent, at least approximately, over the time frame considered. This assumption was generally met in all data sets considered.

For the Mann-Kendall test, the Air Force Center for Environmental Excellence (AFCEE) (2007) provides a decision matrix for the classification of trend results, given in the following table. Note that in the table, the coefficient of variation (CoV) is the standard deviation of the untransformed data divided by the mean, which is a relative measure of variation.

Probability of Significance	M-K Statistic (S)	Coefficient of Variation (CoV)	Classification of Concentration Trend
<0.05	Positive	--	Increasing
	Negative	--	Decreasing
0.05-0.10	Positive	--	Probably Increasing
	Negative	--	Probably Decreasing
>0.10	Positive	--	No Trend
	Negative or zero	≥ 1	No Trend
		< 1	Stable

These recommendations were implemented in carrying out the trend tests evaluating contaminant concentration trends over time in groundwater collected from Site wells. The Mann-Kendall trend tests were performed using USEPA’s ProUCL software⁵.

The ProUCL input and output files generated for the Mann-Kendall trend tests are included in **Appendix B**. A summary of the trend test results is given below.

⁵ Current version 5.1.002, available at <https://www.epa.gov/land-research/proucl-software>

Well Name / Location	Mann-Kendall Test Statistic (S)	2-Tailed Probability (p)	Coefficient of Variation (CoV)	Trend Test Conclusion
MW1-14 (Layer 1)	-15	0.8	0.456	No Trend
MW3-14 (Layer 3)	-313	9.1E-08	0.604	Decreasing
MW5-15-5&6 (Layer 3)	-25	0.618	1.235	No Trend
MW6-16-1 (Layer 3)	-99	0.001	0.636	Decreasing
Note: Trend tests results are interpreted per AFCEE (2007) recommendations – see above				

Statistically-significant decreases in observed PCE concentrations in groundwater collected from MW3-14 and MW6-16-1 over time were evident. The other two data sets tested (PCE at MW1-14 and MW5-15-5&6) did not exhibit statistically significant trends and indicate concentrations are stable at these locations. These results are consistent with the previous Mann-Kendall analyses.

6. Trigger Mechanism and Contingency Plan

Groundwater monitoring has been ongoing at the Site since 2011. Based on statistical analysis, there has been a decreasing trend in PCE concentrations in the groundwater collected from monitoring wells screened in Layer 3. PCE was only detected at MW3-14 (2.91 µg/L in May 2022, 2.17 µg/L in August 2022, and 2.47/2.24 µg/L in December 2022). The detected PCE concentrations were less than the ODWQS (10 µg/L). Based on the analytical results for samples collected by MECP at the Millbrook municipal water well field (March 2023) sampled, PCE concentrations were non-detect. This municipal well is screened in Layer 3.

Based on the analytical results obtained from the several sampling events conducted between 2011 and 2023, there is a decreasing trend in PCE concentrations. The detected PCE concentrations have been consistently below the ODWQS (10 µg/L). A sampling frequency reduction from quarterly monitoring to a semi-annual monitoring could be considered by the MECP for the upcoming monitoring period.

Based on these results, the trigger mechanism would be if:

- A detection of PCE concentrations above the ODWQS; and
- an increasing trend of PCE concentrations over three (3) consecutive sampling events is observed.

If the above are observed, then the following actions would be undertaken:

1. Notification to the MECP Director in writing.
2. Sampling of the municipal water well to confirm groundwater quality at that location.
3. Installation of off-Site wells to assess conditions upgradient of the municipal water well.
4. On-going groundwater monitoring

If ongoing monitoring indicates continued increases in PCE at the south property boundary and detections of PCE at the downgradient boundary wells and at the municipal water well, then the following contingency measures may be implemented:

- Installation of Boundary Control Measures; or Groundwater treatment at the downgradient Millbrook municipal water wellhead.

7. Conclusions

Based on the findings of the 2022-2023 groundwater sampling and monitoring activities undertaken by GHD, the following conclusions are provided.

- 1) The inferred groundwater flow direction at the Site is in a general southeasterly direction in Layer 1 and a southern direction in Layer 3. The groundwater flow direction is generally consistent with previous monitoring events.
- 2) PCE was detected at concentrations above the 2011 Table 2 Generic Standard in groundwater samples collected from monitoring well MW3-14 (2.91 µg/L in May 2022, 2.17 µg/L in August 2022, and 2.47/2.24 µg/L in December 2022) screened in Layer 3. The detected PCE concentrations were less than the ODWQS (10 µg/L). PCE was consistently detected in monitoring well MW3-14 between 2014 and 2020.
- 3) Based on the Mann-Kendall trend test, there are statistically-significant decreases in PCE concentrations at MW3-14 and MW6-16-1. At MW1-14 and MW5-15-5&6, there are no statistically significant PCE concentration trends suggesting that concentrations are stable at these locations.
- 4) Trichloroethene (TCE) was detected in the groundwater samples collected from MW1-14 (1.65 µg/L/1.66 µg/L) on August 22, 2022, above the 2011 Table 2 Generic Standards (1.6 µg/L). MW1-14 is screened in Layer 1 and is located in the vicinity of the former power plant. TCE was not previously detected at MW1-14 during previous sampling events prior to August 2022 and was not detected in the December 2022 and March 2023 sampling events. Further monitoring is required to confirm TCE concentrations.

8. Recommendation

Based on the analytical results for the groundwater sampling activities undertaken between 2011 and 2023, there is a decreasing trend in PCE concentrations. The detected PCE concentrations have been consistently below the ODWQS (10 µg/L). Based on this, it is recommended that the sampling frequency be reduced from quarterly to semi-annually for the upcoming monitoring period.

9. References

- Ontario Ministry of the Environment 2006. Technical Support Document for Ontario Drinking Water Standards, Objectives, and Guidelines. June 2006.
- Ontario Ministry of the Environment 2010. O. Reg. 903.
- Ontario Ministry of the Environment 2011. Soil, Ground Water and Sediment Standards for Use under Part XV.I of the Environmental Protection Act, 15 April 2011.
- 2021-2022 Groundwater Monitoring Program Report, N-00596 Former Millbrook Correctional Centre, 706 County Road 21, Millbrook, Ontario, prepared by GHD for Infrastructure Ontario, dated April 4, 2022.
- 2020-2021 Groundwater Monitoring Program Report, N-00596 Former Millbrook Correctional Centre, 706 County Road 21, Millbrook, Ontario, prepared by GHD for Infrastructure Ontario, dated April 22, 2021.
- Soil Vapour Quality Investigation, N-00596 Former Millbrook Correctional Centre, 706 County Road 21, Millbrook, Ontario, prepared by GHD for Infrastructure Ontario, dated April 15, 2021.

- Soil Vapour Monitoring Program, N-00596 Former Millbrook Correctional Centre, 706 County Road 21, Millbrook, Ontario, prepared by GHD for Infrastructure Ontario, dated April 19, 2022.
- Trent Source Protection Plan
(<https://trentsourceprotection.on.ca/>)
- https://trentsourceprotection.on.ca/images/assessment-reports/Trent/Trent_AR_Report_Maps_Chapter_5_25a-27c.pdf
- <https://trentsourceprotection.on.ca/images/pdfs/our-watersheds/otonabee-peterborough/Millbrook.pdf>

All of Which is Respectfully Submitted,

GHD

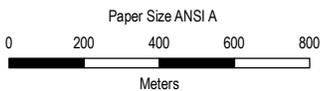
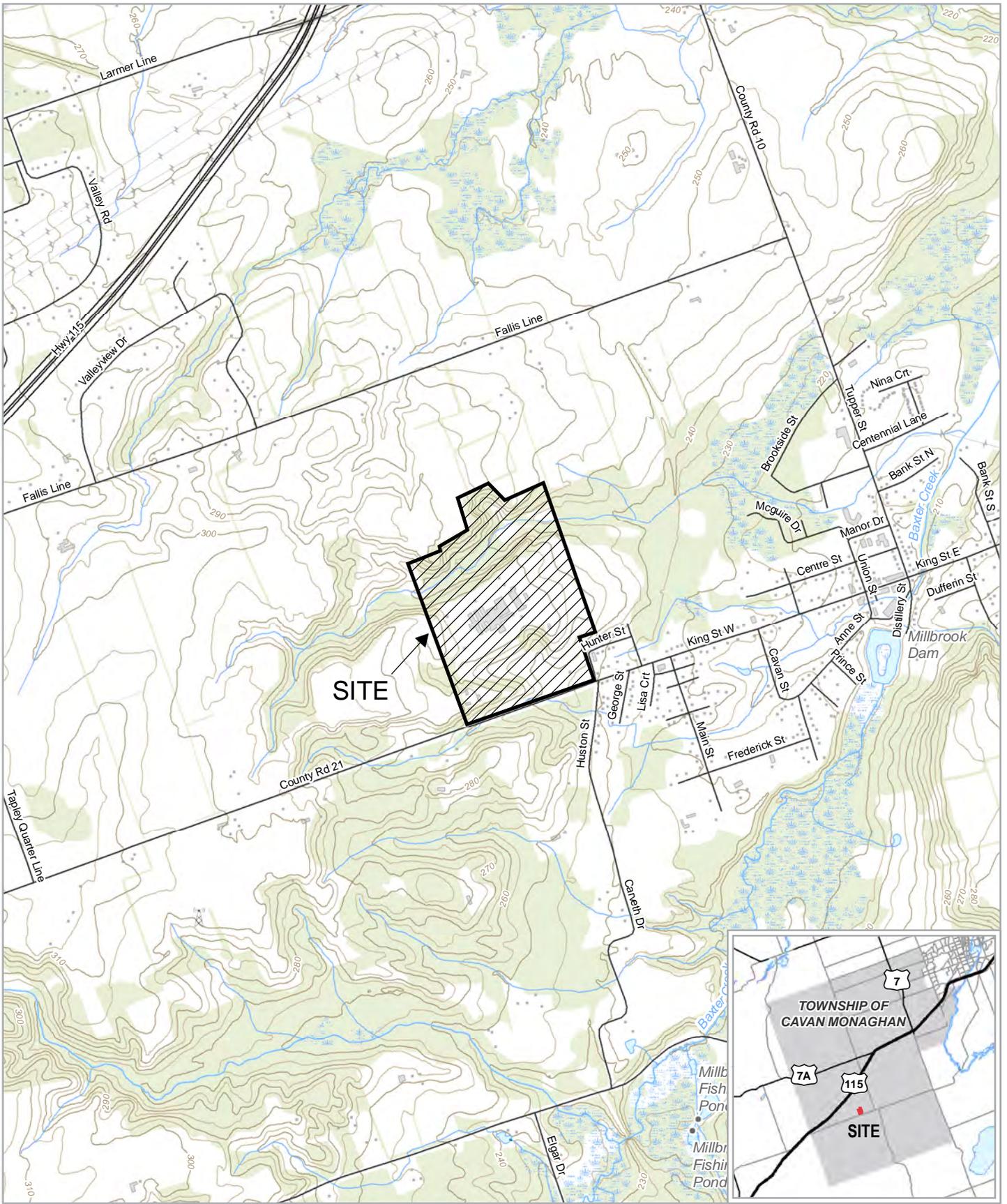


Aditya Khandekar, P.Eng.



Thomas Guoth, P.Eng.

Figures



Map Projection: Transverse Mercator
 Horizontal Datum: North American 1983
 Grid: NAD 1983 UTM Zone 17N

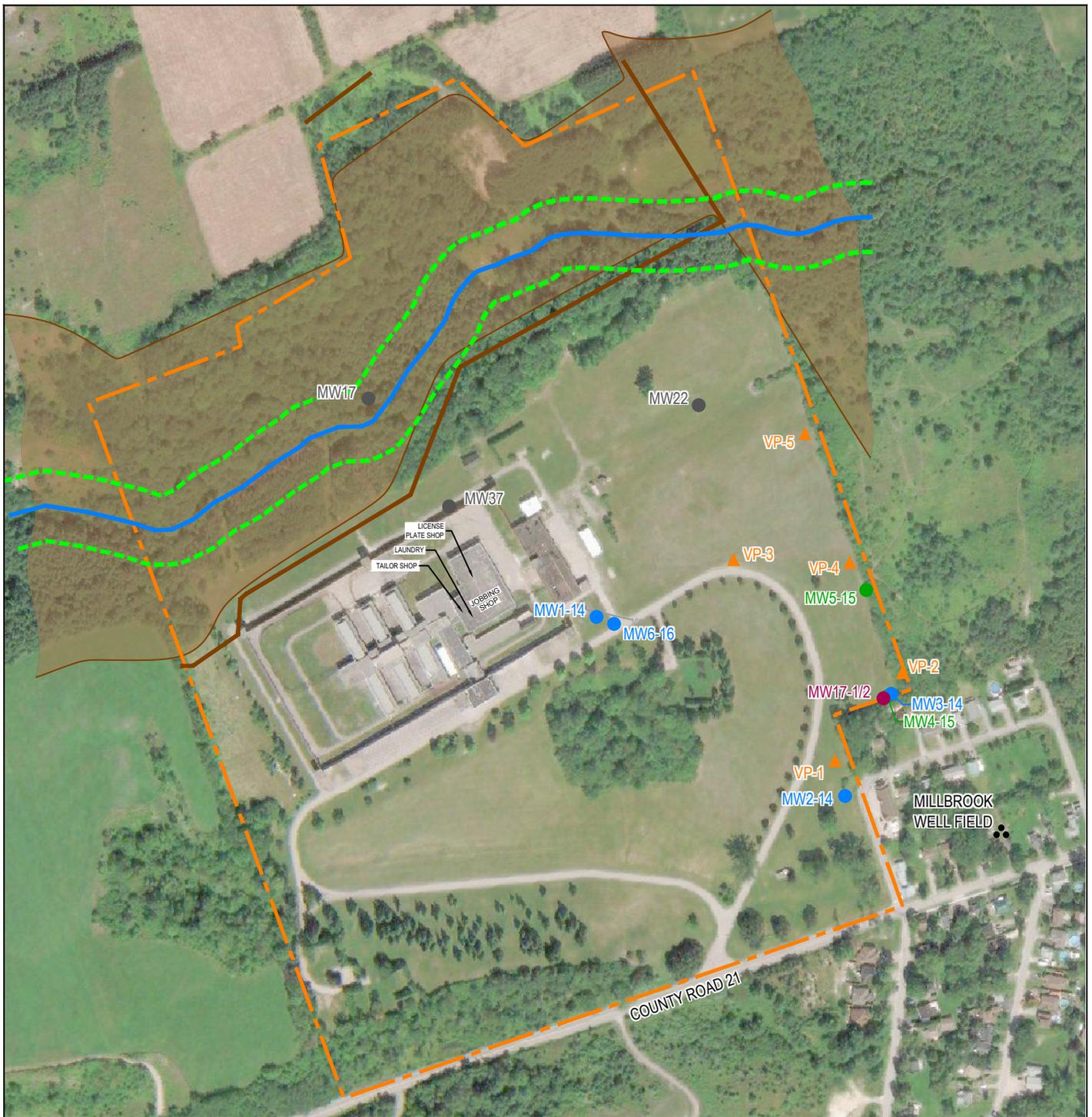


**INFRASTRUCTURE ONTARIO
 (N00596)-FORMER MILLBROOK
 CORRECTIONAL CENTRE
 706 COUNTY ROAD 21, MILLBROOK, ON**

Project No. 11206432
 Revision No. -
 Date Jun 2, 2020

SITE LOCATION MAP

FIGURE 1



LEGEND

- - - SITE BOUNDARY
- - - BAXTER CREEK (APPROXIMATE)
- OAK RIDGE MORAINÉ NATURAL LINKAGE AREA
- 30m SETBACK FROM NATURAL LINKAGE AREA
- 30m SETBACK FROM BAXTER CREEK TRIBUTARY

- MILLBROOK WELL FIELD
- BLUEMETRIC MONITORING WELL LOCATION
- COLE MONITORING WELL LOCATION
- HISTORICAL MONITORING WELL LOCATION
- BLUEMETRIC CMT WELL LOCATION
- ▲ SOIL VAPOUR PROBE LOCATION

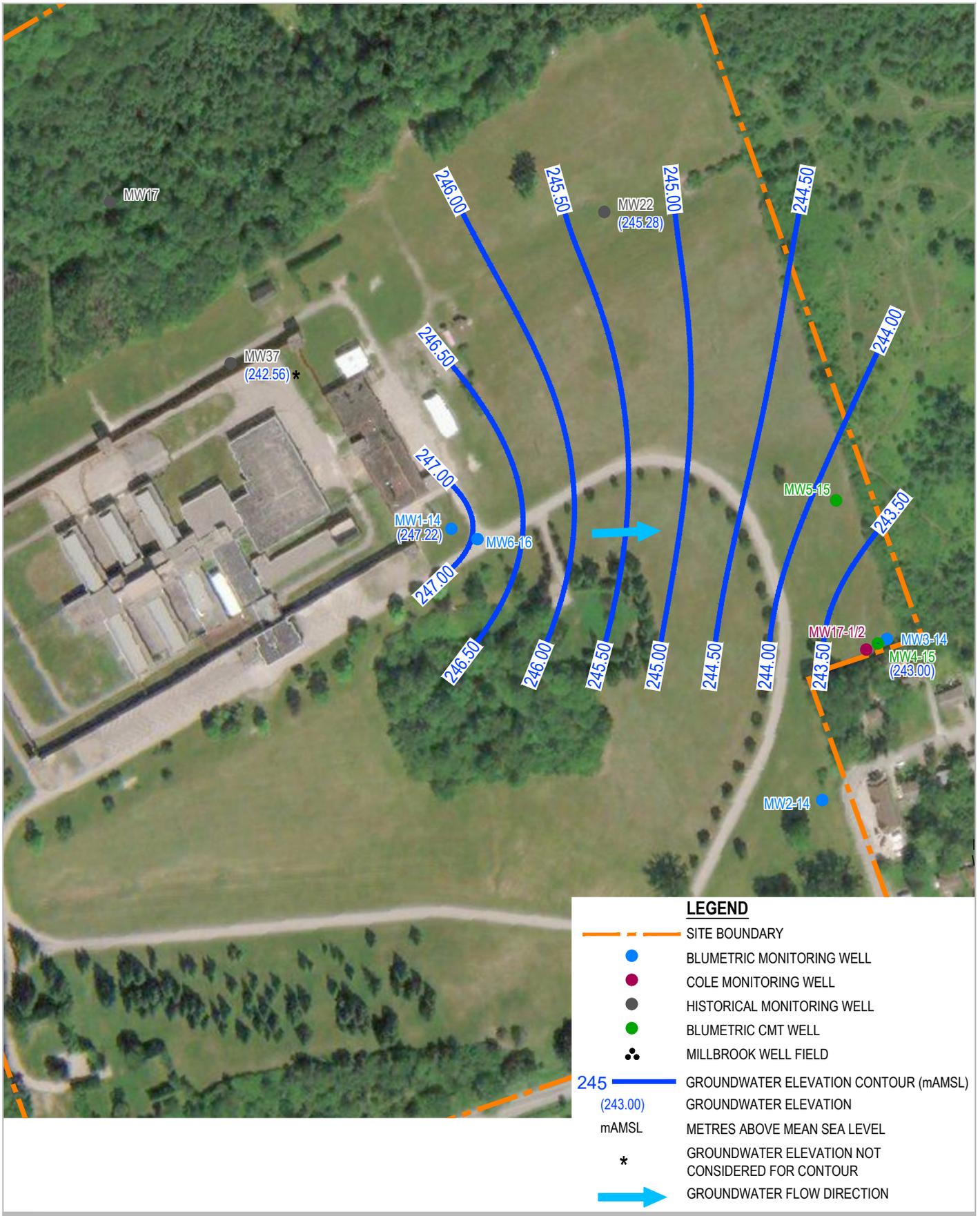


INFRASTRUCTURE ONTARIO
(N00596)-FORMER MILLBROOK
CORRECTIONAL CENTRE
706 COUNTY ROAD 21, MILLBROOK, ON

Project No. 11206432
Date May 2023

**SITE PLAN AND
INVESTIGATIVE LOCATIONS**

FIGURE 2
522



Coordinate System:
UTM ZONE 17 NAD83
METRES



INFRASTRUCTURE ONTARIO (N00596)
FORMER MILLBROOK CORRECTIONAL CENTRE
76 COUNTY ROAD 21, MILLBROOK, ON

**GROUNDWATER ELEVATIONS -
LAYER 1 (MARCH 2023)**

Project No. 11206432
Date May 2023

FIGURE 3A



Coordinate System:
UTM ZONE 17 NAD83
METRES

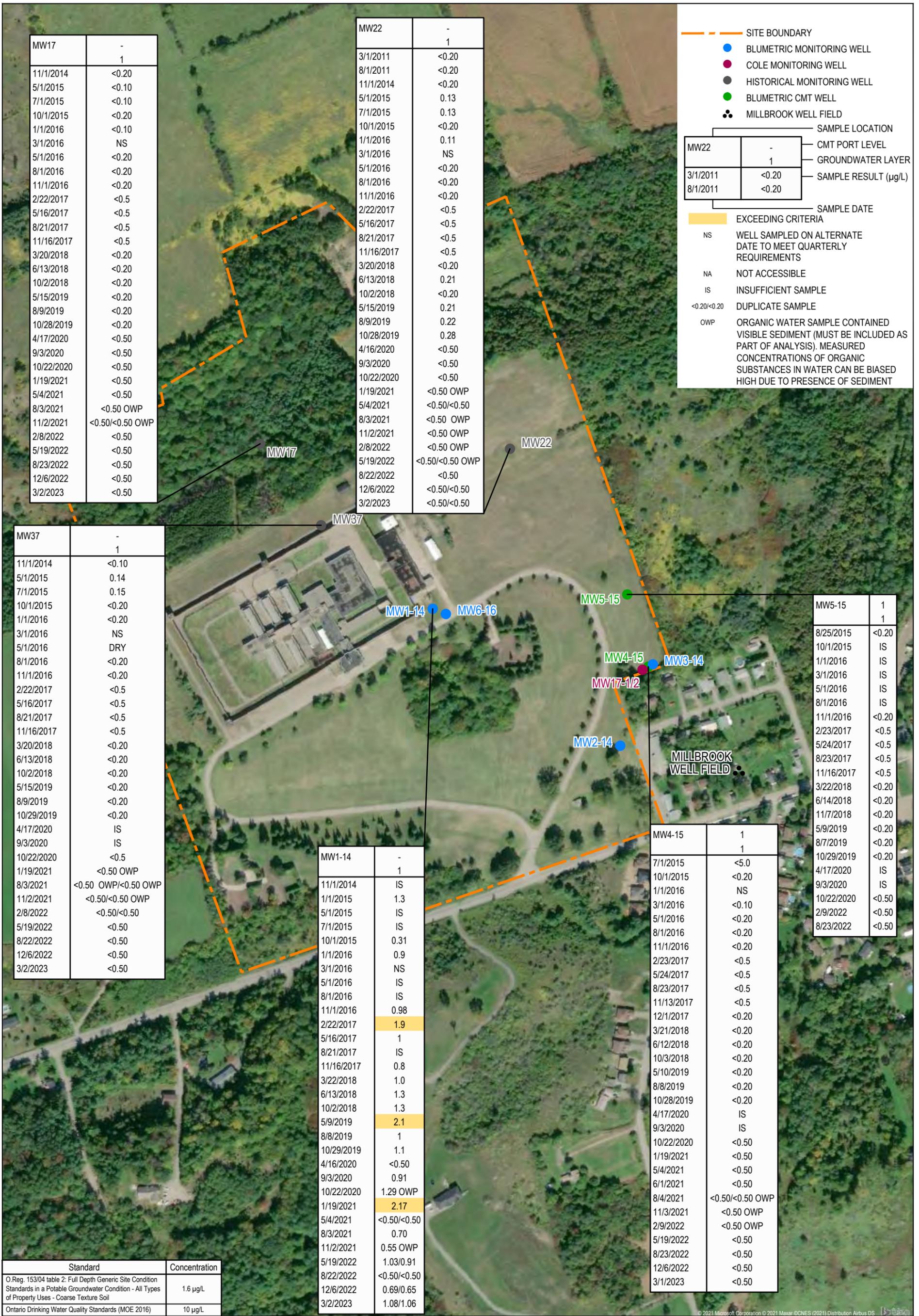


INFRASTRUCTURE ONTARIO (N00596)
FORMER MILLBROOK CORRECTIONAL CENTRE
76 COUNTY ROAD 21, MILLBROOK, ON

**GROUNDWATER ELEVATIONS -
LAYER 3 (MARCH 2023)**

Project No. 11206432
Date May 2023

FIGURE 3B



MW17	-
	1
11/1/2014	<0.20
5/1/2015	<0.10
7/1/2015	<0.10
10/1/2015	<0.20
1/1/2016	<0.10
3/1/2016	NS
5/1/2016	<0.20
8/1/2016	<0.20
11/1/2016	<0.20
2/22/2017	<0.5
5/16/2017	<0.5
8/21/2017	<0.5
11/16/2017	<0.5
3/20/2018	<0.20
6/13/2018	<0.20
10/2/2018	<0.20
5/15/2019	<0.20
8/9/2019	<0.20
10/28/2019	<0.20
4/17/2020	<0.50
9/3/2020	<0.50
10/22/2020	<0.50
1/19/2021	<0.50
5/4/2021	<0.50
8/3/2021	<0.50 OWP
11/2/2021	<0.50/<0.50 OWP
2/8/2022	<0.50
5/19/2022	<0.50
8/23/2022	<0.50
12/6/2022	<0.50
3/2/2023	<0.50

MW22	-
	1
3/1/2011	<0.20
8/1/2011	<0.20
11/1/2014	<0.20
5/1/2015	0.13
7/1/2015	0.13
10/1/2015	<0.20
1/1/2016	0.11
3/1/2016	NS
5/1/2016	<0.20
8/1/2016	<0.20
11/1/2016	<0.20
2/22/2017	<0.5
5/16/2017	<0.5
8/21/2017	<0.5
11/16/2017	<0.5
3/20/2018	<0.20
6/13/2018	0.21
10/2/2018	<0.20
5/15/2019	0.21
8/9/2019	0.22
10/28/2019	0.28
4/16/2020	<0.50
9/3/2020	<0.50
10/22/2020	<0.50
1/19/2021	<0.50 OWP
5/4/2021	<0.50/<0.50
8/3/2021	<0.50 OWP
11/2/2021	<0.50 OWP
2/8/2022	<0.50 OWP
5/19/2022	<0.50/<0.50 OWP
8/22/2022	<0.50
12/6/2022	<0.50/<0.50
3/2/2023	<0.50/<0.50

--- SITE BOUNDARY
● BLUMETRIC MONITORING WELL
● COLE MONITORING WELL
● HISTORICAL MONITORING WELL
● BLUMETRIC CMT WELL
● MILLBROOK WELL FIELD

● SAMPLE LOCATION
MW22 CMT PORT LEVEL
- GROUNDWATER LAYER
3/1/2011 SAMPLE RESULT (µg/L)
8/1/2011 SAMPLE DATE

 EXCEEDING CRITERIA
 NS WELL SAMPLED ON ALTERNATE DATE TO MEET QUARTERLY REQUIREMENTS
 NA NOT ACCESSIBLE
 IS INSUFFICIENT SAMPLE
 <0.20/<0.20 DUPLICATE SAMPLE
 OWP 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

MW37	-
	1
11/1/2014	<0.10
5/1/2015	0.14
7/1/2015	0.15
10/1/2015	<0.20
1/1/2016	<0.20
3/1/2016	NS
5/1/2016	DRY
8/1/2016	<0.20
11/1/2016	<0.20
2/22/2017	<0.5
5/16/2017	<0.5
8/21/2017	<0.5
11/16/2017	<0.5
3/20/2018	<0.20
6/13/2018	<0.20
10/2/2018	<0.20
5/15/2019	<0.20
8/9/2019	<0.20
10/29/2019	<0.20
4/17/2020	IS
9/3/2020	IS
10/22/2020	<0.5
1/19/2021	<0.50 OWP
8/3/2021	<0.50 OWP/<0.50 OWP
11/2/2021	<0.50/<0.50 OWP
2/8/2022	<0.50/<0.50
5/19/2022	<0.50
8/22/2022	<0.50
12/6/2022	<0.50
3/2/2023	<0.50

MW1-14	-
	1
11/1/2014	IS
1/1/2015	1.3
5/1/2015	IS
7/1/2015	IS
10/1/2015	0.31
1/1/2016	0.9
3/1/2016	NS
5/1/2016	IS
8/1/2016	IS
11/1/2016	0.98
2/22/2017	1.9
5/16/2017	1
8/21/2017	IS
11/16/2017	0.8
3/22/2018	1.0
6/13/2018	1.3
10/2/2018	1.3
5/9/2019	2.1
8/8/2019	1
10/29/2019	1.1
4/16/2020	<0.50
9/3/2020	0.91
10/22/2020	1.29 OWP
1/19/2021	2.17
5/4/2021	<0.50/<0.50
8/3/2021	0.70
11/2/2021	0.55 OWP
5/19/2022	1.03/0.91
8/22/2022	<0.50/<0.50
12/6/2022	0.69/0.65
3/2/2023	1.08/1.06

MW4-15	1
	1
7/1/2015	<5.0
10/1/2015	<0.20
1/1/2016	NS
3/1/2016	<0.10
5/1/2016	<0.20
8/1/2016	<0.20
11/1/2016	<0.20
2/23/2017	<0.5
5/24/2017	<0.5
8/23/2017	<0.5
11/13/2017	<0.5
12/1/2017	<0.20
3/21/2018	<0.20
6/12/2018	<0.20
10/3/2018	<0.20
5/10/2019	<0.20
8/8/2019	<0.20
10/28/2019	<0.20
4/17/2020	IS
9/3/2020	IS
10/22/2020	<0.50
1/19/2021	<0.50
5/4/2021	<0.50
6/1/2021	<0.50
8/4/2021	<0.50/<0.50 OWP
11/3/2021	<0.50 OWP
2/9/2022	<0.50 OWP
5/19/2022	<0.50
8/23/2022	<0.50
3/1/2023	<0.50

MW5-15	1
	1
8/25/2015	<0.20
10/1/2015	IS
1/1/2016	IS
3/1/2016	IS
5/1/2016	IS
8/1/2016	IS
11/1/2016	<0.20
2/23/2017	<0.5
5/24/2017	<0.5
8/23/2017	<0.5
11/16/2017	<0.5
3/22/2018	<0.20
6/14/2018	<0.20
11/7/2018	<0.20
5/9/2019	<0.20
8/7/2019	<0.20
10/29/2019	<0.20
4/17/2020	IS
9/3/2020	IS
10/22/2020	<0.50
2/9/2022	<0.50
8/23/2022	<0.50

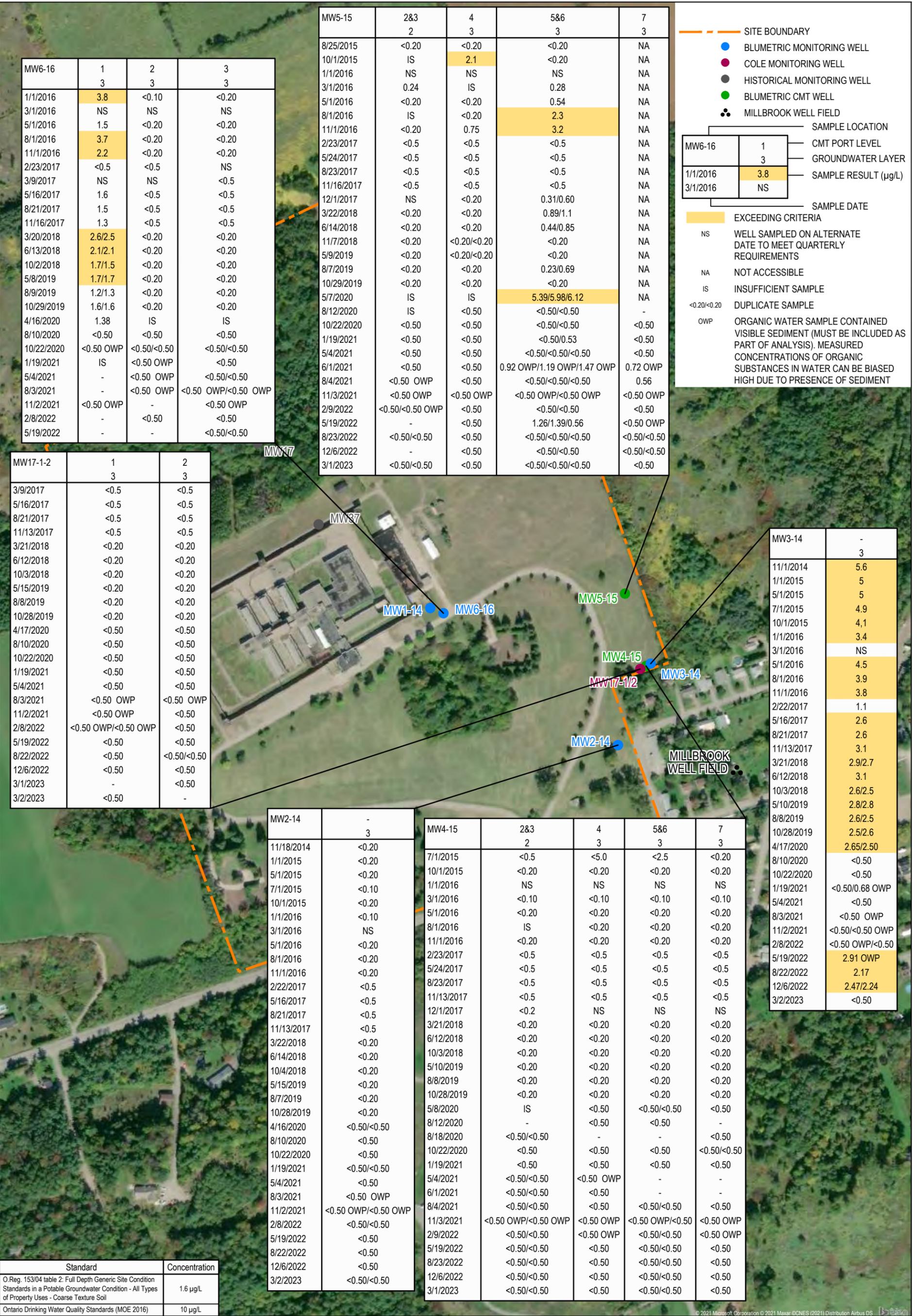
Standard	Concentration
O.Reg. 153/04 table 2: Full Depth Generic Site Condition Standards in a Potable Groundwater Condition - All Types of Property Uses - Coarse Texture Soil	1.6 µg/L
Ontario Drinking Water Quality Standards (MOE 2016)	10 µg/L



INFRASTRUCTURE ONTARIO
 (N00596)-FORMER MILLBROOK
 CORRECTIONAL CENTRE
 76 COUNTY ROAD 21, MILLBROOK, ON
 GROUNDWATER MONITORING
PCE CONCENTRATION IN LAYER 1

Project No. 11206432
 Date May 2023

FIGURE 4A



MW6-16	1	2	3
	3	3	3
1/1/2016	3.8	<0.10	<0.20
3/1/2016	NS	NS	NS
5/1/2016	1.5	<0.20	<0.20
8/1/2016	3.7	<0.20	<0.20
11/1/2016	2.2	<0.20	<0.20
2/23/2017	<0.5	<0.5	NS
3/9/2017	NS	NS	<0.5
5/16/2017	1.6	<0.5	<0.5
8/21/2017	1.5	<0.5	<0.5
11/16/2017	1.3	<0.5	<0.5
3/20/2018	2.6/2.5	<0.20	<0.20
6/13/2018	2.1/2.1	<0.20	<0.20
10/2/2018	1.7/1.5	<0.20	<0.20
5/8/2019	1.7/1.7	<0.20	<0.20
8/9/2019	1.2/1.3	<0.20	<0.20
10/29/2019	1.6/1.6	<0.20	<0.20
4/16/2020	1.38	IS	IS
8/10/2020	<0.50	<0.50	<0.50
10/22/2020	<0.50 OWP	<0.50/<0.50	<0.50/<0.50
1/19/2021	IS	<0.50 OWP	<0.50
5/4/2021	-	<0.50 OWP	<0.50/<0.50
8/3/2021	-	<0.50 OWP	<0.50 OWP/<0.50 OWP
11/2/2021	<0.50 OWP	-	<0.50 OWP
2/8/2022	-	<0.50	<0.50
5/19/2022	-	-	<0.50/<0.50

MW5-15	2&3	4	5&6	7
	2	3	3	3
8/25/2015	<0.20	<0.20	<0.20	NA
10/1/2015	IS	2.1	<0.20	NA
1/1/2016	NS	NS	NS	NA
3/1/2016	0.24	IS	0.28	NA
5/1/2016	<0.20	<0.20	0.54	NA
8/1/2016	IS	<0.20	2.3	NA
11/1/2016	<0.20	0.75	3.2	NA
2/23/2017	<0.5	<0.5	<0.5	NA
5/24/2017	<0.5	<0.5	<0.5	NA
8/23/2017	<0.5	<0.5	<0.5	NA
11/16/2017	<0.5	<0.5	<0.5	NA
12/1/2017	NS	<0.20	0.31/0.60	NA
3/22/2018	<0.20	<0.20	0.89/1.1	NA
6/14/2018	<0.20	<0.20	0.44/0.85	NA
11/7/2018	<0.20	<0.20/<0.20	<0.20	NA
5/9/2019	<0.20	<0.20/<0.20	<0.20	NA
8/7/2019	<0.20	<0.20	0.23/0.69	NA
10/29/2019	<0.20	<0.20	<0.20	NA
5/7/2020	IS	IS	5.39/5.98/6.12	NA
8/12/2020	IS	<0.50	<0.50/<0.50	-
10/22/2020	<0.50	<0.50	<0.50/<0.50	<0.50
1/19/2021	<0.50	<0.50	<0.50/0.53	<0.50
5/4/2021	<0.50	<0.50	<0.50/<0.50/<0.50	<0.50
6/1/2021	<0.50	<0.50	0.92 OWP/1.19 OWP/1.47 OWP	0.72 OWP
8/4/2021	<0.50 OWP	<0.50	<0.50/<0.50/<0.50	0.56
11/3/2021	<0.50 OWP	<0.50 OWP	<0.50 OWP/<0.50 OWP	<0.50 OWP
2/9/2022	<0.50/<0.50 OWP	<0.50	<0.50/<0.50	<0.50
5/19/2022	-	<0.50	1.26/1.39/0.56	<0.50 OWP
8/23/2022	<0.50/<0.50	<0.50	<0.50/<0.50/<0.50	<0.50/<0.50
12/6/2022	-	<0.50	<0.50/<0.50	<0.50/<0.50
3/1/2023	<0.50/<0.50	<0.50	<0.50/<0.50/<0.50	<0.50

Legend

- SITE BOUNDARY
- BLUMETRIC MONITORING WELL
- COLE MONITORING WELL
- HISTORICAL MONITORING WELL
- BLUMETRIC CMT WELL
- MILLBROOK WELL FIELD

Data Table Legend

MW6-16	1	Sample Location
	3	CMT PORT LEVEL
		GROUNDWATER LAYER
1/1/2016	3.8	Sample Result (µg/L)
3/1/2016	NS	Sample Date

Abbreviations

- NS: WELL SAMPLED ON ALTERNATE DATE TO MEET QUARTERLY REQUIREMENTS
- NA: NOT ACCESSIBLE
- IS: INSUFFICIENT SAMPLE
- <0.20/<0.20: DUPLICATE SAMPLE
- OWP: 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

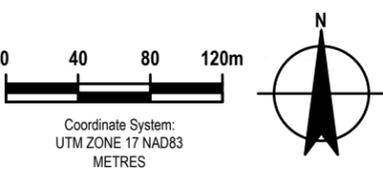
MW17-1-2	1	2
	3	3
3/9/2017	<0.5	<0.5
5/16/2017	<0.5	<0.5
8/21/2017	<0.5	<0.5
11/13/2017	<0.5	<0.5
3/21/2018	<0.20	<0.20
6/12/2018	<0.20	<0.20
10/3/2018	<0.20	<0.20
5/15/2019	<0.20	<0.20
8/8/2019	<0.20	<0.20
10/28/2019	<0.20	<0.20
4/17/2020	<0.50	<0.50
8/10/2020	<0.50	<0.50
10/22/2020	<0.50	<0.50
1/19/2021	<0.50	<0.50
5/4/2021	<0.50	<0.50
8/3/2021	<0.50 OWP	<0.50 OWP
11/2/2021	<0.50 OWP	<0.50
2/8/2022	<0.50 OWP/<0.50 OWP	<0.50
5/19/2022	<0.50	<0.50
8/22/2022	<0.50	<0.50/<0.50
12/6/2022	<0.50	<0.50
3/1/2023	-	<0.50
3/2/2023	<0.50	-

MW3-14	
	3
11/1/2014	5.6
1/1/2015	5
5/1/2015	5
7/1/2015	4.9
10/1/2015	4.1
1/1/2016	3.4
3/1/2016	NS
5/1/2016	4.5
8/1/2016	3.9
11/1/2016	3.8
2/22/2017	1.1
5/16/2017	2.6
8/21/2017	2.6
11/13/2017	3.1
3/21/2018	2.9/2.7
6/12/2018	3.1
10/3/2018	2.6/2.5
5/10/2019	2.8/2.8
8/8/2019	2.6/2.5
10/28/2019	2.5/2.6
4/17/2020	2.65/2.50
8/10/2020	<0.50
10/22/2020	<0.50
1/19/2021	<0.50/0.68 OWP
5/4/2021	<0.50
8/3/2021	<0.50 OWP
11/2/2021	<0.50/<0.50 OWP
2/8/2022	<0.50 OWP/<0.50
5/19/2022	2.91 OWP
8/22/2022	2.17
12/6/2022	2.47/2.24
3/2/2023	<0.50

MW2-14	
	3
11/18/2014	<0.20
1/1/2015	<0.20
5/1/2015	<0.20
7/1/2015	<0.10
10/1/2015	<0.20
1/1/2016	<0.10
3/1/2016	NS
5/1/2016	<0.20
8/1/2016	<0.20
11/1/2016	<0.20
2/22/2017	<0.5
5/16/2017	<0.5
8/21/2017	<0.5
11/13/2017	<0.5
3/22/2018	<0.20
6/14/2018	<0.20
10/4/2018	<0.20
5/15/2019	<0.20
8/7/2019	<0.20
10/28/2019	<0.20
4/16/2020	<0.50/<0.50
8/10/2020	<0.50
10/22/2020	<0.50
1/19/2021	<0.50/<0.50
5/4/2021	<0.50
8/3/2021	<0.50 OWP
11/2/2021	<0.50 OWP/<0.50 OWP
2/8/2022	<0.50/<0.50
5/19/2022	<0.50
8/22/2022	<0.50
12/6/2022	<0.50
3/2/2023	<0.50/<0.50

MW4-15	2&3	4	5&6	7
	2	3	3	3
7/1/2015	<0.5	<5.0	<2.5	<0.20
10/1/2015	<0.20	<0.20	<0.20	<0.20
1/1/2016	NS	NS	NS	NS
3/1/2016	<0.10	<0.10	<0.10	<0.10
5/1/2016	<0.20	<0.20	<0.20	<0.20
8/1/2016	IS	<0.20	<0.20	<0.20
11/1/2016	<0.20	<0.20	<0.20	<0.20
2/23/2017	<0.5	<0.5	<0.5	<0.5
5/24/2017	<0.5	<0.5	<0.5	<0.5
8/23/2017	<0.5	<0.5	<0.5	<0.5
11/13/2017	<0.5	<0.5	<0.5	<0.5
12/1/2017	<0.2	NS	NS	NS
3/21/2018	<0.20	<0.20	<0.20	<0.20
6/12/2018	<0.20	<0.20	<0.20	<0.20
10/3/2018	<0.20	<0.20	<0.20	<0.20
5/10/2019	<0.20	<0.20	<0.20	<0.20
8/8/2019	<0.20	<0.20	<0.20	<0.20
10/28/2019	<0.20	<0.20	<0.20	<0.20
5/8/2020	IS	<0.50	<0.50/<0.50	<0.50
8/12/2020	-	<0.50	<0.50	-
8/18/2020	<0.50/<0.50	-	-	<0.50
10/22/2020	<0.50	<0.50	<0.50	<0.50/<0.50
1/19/2021	<0.50	<0.50	<0.50	<0.50
5/4/2021	<0.50/<0.50	<0.50 OWP	-	-
6/1/2021	<0.50/<0.50	<0.50	-	-
8/4/2021	<0.50/<0.50	<0.50	<0.50/<0.50	<0.50
11/3/2021	<0.50 OWP/<0.50 OWP	<0.50 OWP	<0.50 OWP/<0.50	<0.50 OWP
2/9/2022	<0.50/<0.50	<0.50 OWP	<0.50/<0.50	<0.50 OWP
5/19/2022	<0.50/<0.50	<0.50	<0.50/<0.50	<0.50
8/23/2022	<0.50/<0.50	<0.50	<0.50/<0.50	<0.50
12/6/2022	<0.50/<0.50	<0.50	<0.50/<0.50	<0.50
3/1/2023	<0.50/<0.50	<0.50	<0.50/<0.50	<0.50

Standard	Concentration
O.Reg. 153/04 table 2: Full Depth Generic Site Condition Standards in a Potable Groundwater Condition - All Types of Property Uses - Coarse Texture Soil	1.6 µg/L
Ontario Drinking Water Quality Standards (MOE 2016)	10 µg/L



INFRASTRUCTURE ONTARIO
(N00596)-FORMER MILLBROOK
CORRECTIONAL CENTRE
76 COUNTY ROAD 21, MILLBROOK, ON
GROUNDWATER MONITORING

Project No. 11206432
Date May 2023

PCE CONCENTRATION IN LAYER 2 & 3

FIGURE 4B

MW1-14	Tetrachloroethene
11/1/2014	IS
1/1/2015	1.3
5/1/2015	IS
7/1/2015	IS
10/1/2015	0.31
1/1/2016	0.9
3/1/2016	NS
5/1/2016	IS
8/1/2016	IS
11/1/2016	0.98
2/22/2017	1.9
5/16/2017	1
8/21/2017	IS
11/16/2017	0.8
3/22/2018	1.0
6/13/2018	1.3
10/2/2018	1.3
5/9/2019	2.1
8/8/2019	1
10/29/2019	1.1
4/16/2020	<0.50
9/3/2020	0.91
10/22/2020	1.29 OWP
1/19/2021	2.17
5/4/2021	<0.50/<0.50
8/3/2021	0.70
11/2/2021	0.55 OWP
5/19/2022	1.03/0.91
8/22/2022	<0.50/<0.50
12/6/2022	0.69/0.65
3/2/2023	1.08/1.06

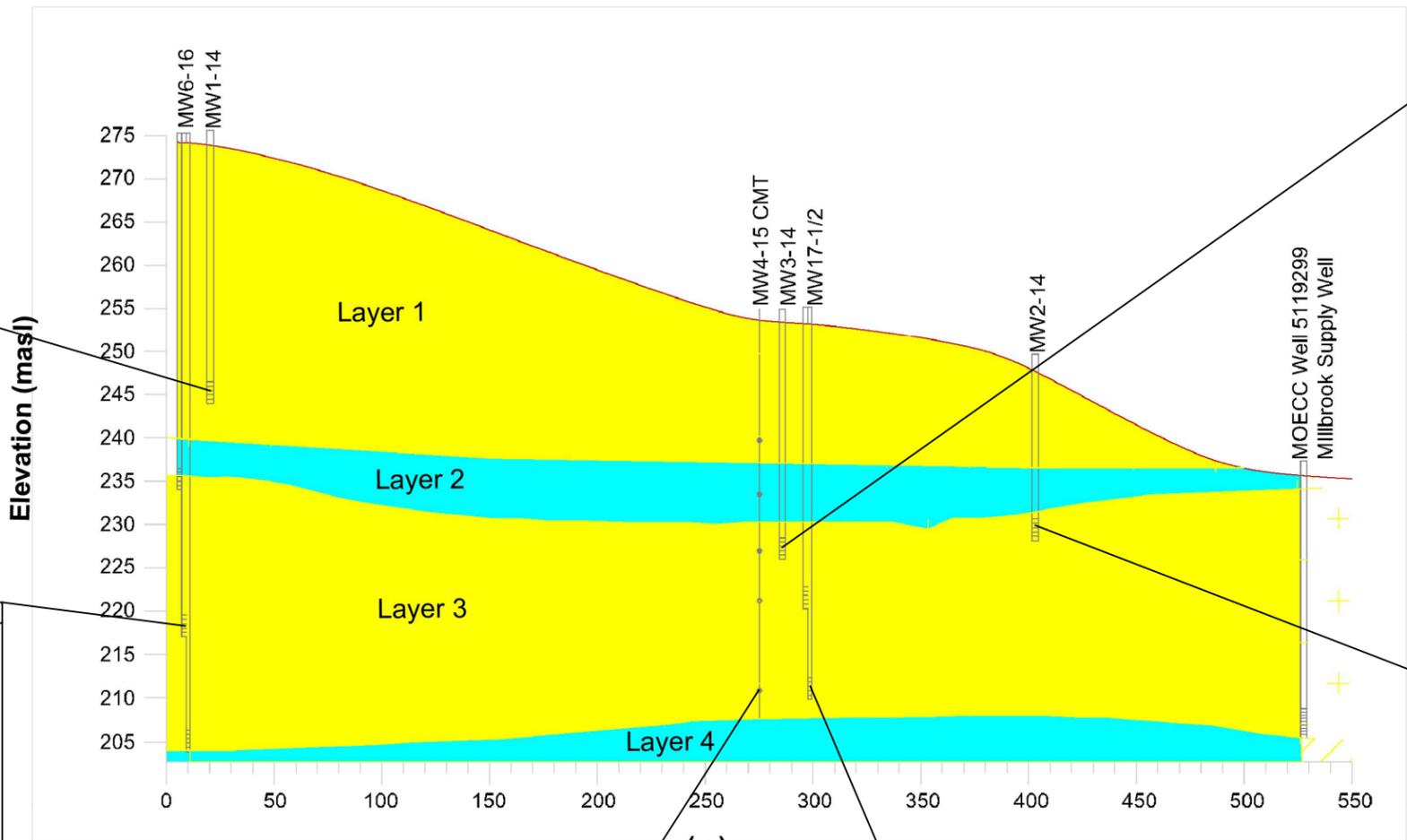
MW6-16	Tetrachloroethene
1/1/2016	3.8/<0.10/<0.20
3/1/2016	NS/NS/NS
5/1/2016	<0.20/<0.20/1.5
8/1/2016	<0.20/<0.20/3.7
11/1/2016	<0.20/2.2/<0.20
2/23/2017	NS/<0.5/<0.5
3/9/2017	<0.5/NS/NS
5/16/2017	1.6/<0.5/<0.5
8/21/2017	1.5/<0.5/<0.5
11/16/2017	<0.5/<0.5/1.3
3/20/2018	2.6/2.5/<0.20/<0.20
6/13/2018	2.1/2.1/<0.20/<0.20
10/2/2018	<0.20/<0.20/1.7/1.5
5/8/2019	<0.20/<0.20/1.7/1.7
8/9/2019	<0.20/<0.20/1.2/1.3
10/29/2019	<0.20/<0.20/1.6/1.6
4/16/2020	IS/1.38/IS
8/10/2020	<0.50/<0.50/<0.50
10/22/2020	<0.50 OWP/<0.50/<0.50/<0.50/<0.50
1/19/2021	<0.50 OWP/<0.50 OWP/IS
5/4/2021	<0.50 OWP/<0.50/<0.50
8/3/2021	<0.50 OWP/<0.50 OWP/<0.50 OWP
11/2/2021	<0.50 OWP/<0.50 OWP
2/8/2022	<0.50/<0.50
5/19/2022	<0.50/<0.50

MW4-15	Tetrachloroethene
7/1/2015	<5.0/<5.0/<2.5/<0.20/<0.5
10/1/2015	<0.20/<0.20/<0.20/<0.20/<0.20
1/1/2016	NS/NS/NS/NS/NS
3/1/2016	<0.10/<0.10/<0.10/<0.10/<0.10
5/1/2016	<0.20/<0.20/<0.20/<0.20/<0.20
8/1/2016	<0.20/IS/<0.20/<0.20/<0.20
11/1/2016	<0.20/<0.20/<0.20/<0.20/<0.20
2/23/2017	<0.5/<0.5/<0.5/<0.5/<0.5
5/24/2017	<0.5/<0.5/<0.5/<0.5/<0.5
8/23/2017	<0.5/<0.5/<0.5/<0.5/<0.5
11/13/2017	<0.5/<0.5/<0.5/<0.5/<0.5
12/1/2017	<0.20/<0.20/NS/NS/NS
3/21/2018	<0.20/<0.20/<0.20/<0.20/<0.20
6/12/2018	<0.20/<0.20/<0.20/<0.20/<0.20
10/3/2018	<0.20/<0.20/<0.20/<0.20/<0.20
5/10/2019	<0.20/<0.20/<0.20/<0.20/<0.20
8/8/2019	<0.20/<0.20/<0.20/<0.20/<0.20
10/28/2019	<0.20/<0.20/<0.20/<0.20/<0.20
4/17/2020	IS
5/8/2020	<0.50/<0.50/<0.50/IS/<0.50
8/12/2020	<0.50/<0.50
8/18/2020	<0.50/<0.50/<0.50
9/3/2020	IS
10/22/2020	<0.50/<0.50/<0.50/<0.50/<0.50
1/19/2021	<0.50/<0.50/<0.50/<0.50/<0.50
5/4/2021	<0.50/<0.50/<0.50/<0.50 OWP
6/1/2021	<0.50/<0.50/<0.50/<0.50/<0.50
8/4/2021	<0.50/<0.50 OWP/<0.50/<0.50/<0.50/<0.50/<0.50
11/3/2021	<0.50 OWP/<0.50 OWP/<0.50 OWP/<0.50 OWP/<0.50 OWP/<0.50 OWP
2/9/2022	<0.50 OWP/<0.50 OWP/<0.50 OWP/<0.50 OWP/<0.50 OWP
5/19/2022	<0.50/<0.50/<0.50/<0.50/<0.50/<0.50
8/23/2022	<0.50/<0.50/<0.50/<0.50/<0.50/<0.50
12/6/2022	<0.50/<0.50/<0.50/<0.50/<0.50/<0.50
3/1/2023	<0.50/<0.50/<0.50/<0.50/<0.50/<0.50

MW17-1-2	Tetrachloroethene
3/9/2017	<0.5/<0.5
5/16/2017	<0.5/<0.5
8/21/2017	<0.5/<0.5
11/13/2017	<0.5/<0.5
3/21/2018	<0.20/<0.20
6/12/2018	<0.20/<0.20
10/3/2018	<0.20/<0.20
5/15/2019	<0.20/<0.20
8/8/2019	<0.20/<0.20
10/28/2019	<0.20/<0.20
4/17/2020	<0.50/<0.50
8/10/2020	<0.50/<0.50
10/22/2020	<0.50/<0.50
1/19/2021	<0.50/<0.50
5/4/2021	<0.50/<0.50
8/3/2021	<0.50 OWP/<0.50 OWP
11/2/2021	<0.50 OWP/<0.50
2/8/2022	<0.50 OWP/<0.50 OWP/<0.50
5/19/2022	<0.50/<0.50
8/22/2022	<0.50/<0.50/<0.50
12/6/2022	<0.50/<0.50
3/1/2023	<0.50
3/2/2023	<0.50

MW2-14	Tetrachloroethene
11/18/2014	<0.20
1/1/2015	<0.20
5/1/2015	<0.20
7/1/2015	<0.10
10/1/2015	<0.20
1/1/2016	<0.10
3/1/2016	NS
5/1/2016	<0.20
8/1/2016	<0.20
11/1/2016	<0.20
2/22/2017	<0.5
5/16/2017	<0.5
8/21/2017	<0.5
11/13/2017	<0.5
3/22/2018	<0.20
6/14/2018	<0.20
10/4/2018	<0.20
5/15/2019	<0.20
8/7/2019	<0.20
10/28/2019	<0.20
4/16/2020	<0.50/<0.50
8/10/2020	<0.50
10/22/2020	<0.50
1/19/2021	<0.50/<0.50
5/4/2021	<0.50
8/3/2021	<0.50 OWP
11/2/2021	<0.50 OWP/<0.50 OWP
2/8/2022	<0.50/<0.50
5/19/2022	<0.50
8/22/2022	<0.50
12/6/2022	<0.50
3/2/2023	<0.50/<0.50

MW3-14	Tetrachloroethene
11/1/2014	5.6
1/1/2015	5
5/1/2015	5
7/1/2015	4.9
10/1/2015	4.1
1/1/2016	3.4
3/1/2016	NS
5/1/2016	4.5
8/1/2016	3.9
11/1/2016	3.8
2/22/2017	1.1
5/16/2017	2.6
8/21/2017	2.6
11/13/2017	3.1
3/21/2018	2.9/2.7
6/12/2018	3.1
10/3/2018	2.6/2.5
5/10/2019	2.8/2.8
8/8/2019	2.6/2.5
10/28/2019	2.5/2.6
4/17/2020	2.65/2.50
8/10/2020	<0.50
10/22/2020	<0.50
1/19/2021	<0.50/0.68 OWP
5/4/2021	<0.50
8/3/2021	<0.50 OWP
11/2/2021	<0.50/<0.50 OWP
2/8/2022	<0.50 OWP/<0.50
5/19/2022	2.91 OWP
8/22/2022	2.17
12/6/2022	2.47/2.24
3/2/2023	<0.50

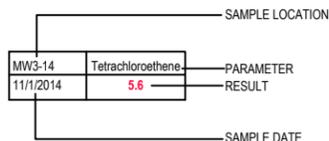


LEGEND

- sand
- clay

REFERENCE

Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA
 BluMetric (2016). Additional Investigation IO RFS 15-080.



NOTES:
 1) RESULTS ARE PRESENTED IN MICROGRAMS PER LITRE (µg/L)
 2) SHADING AND BOLD TEXT INDICATES THE CONCENTRATION EXCEEDED THE APPLICABLE MECG TABLE 2 STANDARD.

NOT TO SCALE



INFRASTRUCTURE ONTARIO
 (N00596)-FORMER MILLBROOK
 CORRECTIONAL CENTRE
 706 COUNTY ROAD 21, MILLBROOK, ON
**GEOLOGIC CROSS-SECTION AND
 PCE CONCENTRATION TRENDS**

Project No. 11206432
 Date May 2023

FIGURE 5

Tables

Field Sample Key
2022-2023 Groundwater Monitoring Report
Former Millbrook Correctional Centre
706 County Road 21, Millbrook, ON

Sample Location	Layer	Sample Identification	Sample Type	Sample Date	VOCs
Sample Event 1 (WT2204361-May 2022)					
MW22	1	GW-11206432-220519-MW22-WM	G	05/19/22	X
MW5-15-5	3	GW-11206432-220519-MW5-15-5-WM	G	05/19/22	X
MW5-15-7	3	GW-11206432-220519-MW5-15-7-WM	G	05/19/22	X
MW17-1	3	GW-11206432-220519-MW17-1-WM	G	05/19/22	X
MW4-15-6	3	GW-11206432-220519-MW4-15-6-WM	G	05/19/22	X
MW4-15-7	3	GW-11206432-220519-MW4-15-7-WM	G	05/19/22	X
MW4-15-1	1	GW-11206432-220519-MW4-15-1-WM	G	05/19/22	X
MW4-15-3	2	GW-11206432-220519-MW4-15-3-WM	G	05/19/22	X
MW4-15-4	3	GW-11206432-220519-MW4-15-4-WM	G	05/19/22	X
MW17	1	GW-11206432-220519-MW17-WM	G	05/19/22	X
MW6-16-3	3	GW-11206432-220519-MW6-16-3-WM	G	05/19/22	X
MW37	1	GW-11206432-220519-MW37-WM	G	05/19/22	X
MW5-15-4	3	GW-11206432-220519-MW5-15-4-WM	G	05/19/22	X
MW17-2	3	GW-11206432-220519-MW17-2-WM	G	05/19/22	X
MW4-15-2	2	GW-11206432-220519-MW4-15-2-WM	G	05/19/22	X
MW5-15-6	3	GW-11206432-220519-MW5-15-6-WM	G	05/19/22	X
MW2-14	3	GW-11206432-220519-MW2-14-WM	G	05/19/22	X
MW3-14	3	GW-11206432-220519-MW3-14-WM	G	05/19/22	X
MW1-14	1	GW-11206432-220519-MW1-14-WM	G	05/19/22	X
MW4-15-5	3	GW-11206432-220519-MW4-15-5-WM	G	05/19/22	X
MW6-16-3	3	GW-11206432-220519-DUP-1-WM	DUP	05/19/22	X
MW1-14	1	GW-11206432-220519-DUP-2-WM	DUP	05/19/22	X
MW5-15-6	3	GW-11206432-220519-DUP-3-WM	DUP	05/19/22	X
MW22	1	GW-11206432-220519-DUP-4-WM	DUP	05/19/22	X
Sample Event 2 (WT2212030-August 2022)					
MW4-15-1	1	W-11206432-220823-MW4-15-1-WM	G	08/23/22	X
MW4-15-2	2	W-11206432-220823-MW4-15-2-WM	G	08/23/22	X
MW4-15-3	2	W-11206432-220823-MW4-15-3-WM	G	08/23/22	X
MW4-15-4	3	W-11206432-220823-MW4-15-4-WM	G	08/23/22	X
MW4-15-5	3	W-11206432-220823-MW4-15-5-WM	G	08/23/22	X
MW4-15-6	3	W-11206432-220823-MW4-15-6-WM	G	08/23/22	X
MW4-15-7	3	W-11206432-220823-MW4-15-7-WM	G	08/23/22	X
MW5-15-1	1	W-11206432-220823-MW5-15-1-WM	G	08/23/22	X
MW5-15-2	2	W-11206432-220823-MW5-15-2-WM	G	08/23/22	X
MW5-15-3	2	W-11206432-220823-MW5-15-3-WM	G	08/23/22	X
MW5-15-4	3	W-11206432-220823-MW5-15-4-WM	G	08/23/22	X
MW5-15-5	3	W-11206432-220823-MW5-15-5-WM	G	08/23/22	X
MW5-15-6	3	W-11206432-220823-MW5-15-6-WM	G	08/23/22	X
MW5-15-7	3	W-11206432-220823-MW5-15-7-WM	G	08/23/22	X
MW17	1	W-11206432-220823-MW17-WM	G	08/23/22	X
MW22	1	W-11206432-220822-MW22-WM	G	08/22/22	X
MW1-14	1	W-11206432-220822-MW1-14-WM	G	08/22/22	X
MW17-2	3	W-11206432-220822-MW17-2-WM	G	08/22/22	X
MW3-14	3	W-11206432-220822-MW3-14-WM	G	08/22/22	X
MW17-1	3	W-11206432-220822-MW17-1-WM	G	08/22/22	X
MW37	1	W-11206432-220822-MW37-WM	G	08/22/22	X
MW2-14	3	W-11206432-220822-MW2-14-WM	G	08/22/22	X
MW5-15-7	3	W-11206432-220823-DUP-1-WM	DUP	08/23/22	X
MW1-14	1	W-11206432-220822-DUP-2-WM	DUP	08/22/22	
MW5-15-6	3	W-11206432-220823-DUP-3-WM	DUP	08/23/22	X
MW22	1	W-11206432-220822-DUP-4-WM	DUP	08/22/22	X
Sample Event 3 (WT2224461-December 2022)					
MW17	1	GW-11206432-221206-MW17	G	12/06/22	X
MW22	1	GW-11206432-221206-MW22	G	12/06/22	X
MW37	1	GW-11206432-221206-MW37	G	12/06/22	X
MW1-14	1	GW-11206432-221206-MW1-14	G	12/06/22	X
MW2-14	3	GW-11206432-221206-MW2-14	G	12/06/22	X
MW3-14	3	GW-11206432-221206-MW3-14	G	12/06/22	X
MW17-1	3	GW-11206432-221206-MW17-1	G	12/06/22	X
MW17-2	3	GW-11206432-221206-MW17-2	G	12/06/22	X
MW4-15-1	1	GW-11206432-221206-MW4-15-1	G	12/06/22	X
MW4-15-2	2	GW-11206432-221206-MW4-15-2	G	12/06/22	X
MW4-15-3	2	GW-11206432-221206-MW4-15-3	G	12/06/22	X
MW4-15-4	3	GW-11206432-221206-MW4-15-4	G	12/06/22	X
MW4-15-5	3	GW-11206432-221206-MW4-15-5	G	12/06/22	X
MW4-15-6	3	GW-11206432-221206-MW4-15-6	G	12/06/22	X
MW4-15-7	3	GW-11206432-221206-MW4-15-7	G	12/06/22	X
MW5-15-4	3	GW-11206432-221206-MW5-15-4	G	12/06/22	X
MW5-15-5	3	GW-11206432-221206-MW5-15-5	G	12/06/22	X
MW5-15-6	3	GW-11206432-221206-MW5-15-6	G	12/06/22	X
MW5-15-7	3	GW-11206432-221206-MW5-15-7	G	12/06/22	X
MW3-14	3	GW-11206432-221206-DUP1	DUP	12/06/22	X
MW1-14	1	GW-11206432-221206-DUP2	DUP	12/06/22	X
MW5-15-7	3	GW-11206432-221206-DUP3	DUP	12/06/22	X
MW22	1	GW-11206432-221206-DUP4	DUP	12/06/22	X
Sample Event 4 (WT2305429-March 2023)					
MW17	1	GW-11206432-230302-JK-MW17	G	03/02/23	X
MW1-14	1	GW-11206432-230302-JK-MW1-14	G	03/02/23	X

Field Sample Key
2022-2023 Groundwater Monitoring Report
Former Millbrook Correctional Centre
706 County Road 21, Millbrook, ON

Sample Location	Layer	Sample Identification	Sample Type	Sample Date	VOCs
Sample Event 4 (WT2305429-March 2023)					
MW22	1	GW-11206432-230302-JK-MW22	G	03/02/23	X
MW37	1	GW-11206432-230302-JK-MW37	G	03/02/23	X
MW3-14	3	GW-11206432-230302-JK-MW3-14	G	03/02/23	X
MW4-15-4	3	GW-11206432-230301-WM-MW4-15-4	G	03/01/23	X
MW4-15-3	2	GW-11206432-230301-WM-MW4-15-3	G	03/01/23	X
MW4-15-7	3	GW-11206432-230301-WM-MW4-15-7	G	03/01/23	X
MW4-15-1	1	GW-11206432-230301-WM-MW4-15-1	G	03/01/23	X
MW4-15-6	3	GW-11206432-230301-WM-MW4-15-6	G	03/01/23	X
MW4-15-2	2	GW-11206432-230301-WM-MW4-15-2	G	03/01/23	X
MW4-15-5	3	GW-11206432-230301-WM-MW4-15-5	G	03/01/23	X
MW5-15-7	3	GW-11206432-230301-WM-MW5-15-7	G	03/01/23	X
MW5-15-6	3	GW-11206432-230301-WM-MW5-15-6	G	03/01/23	X
MW17-1	3	GW-11206432-230302-JK-MW17-1	G	03/02/23	X
MW17-2	3	GW-11206432-230301-JK-MW17-2	G	03/01/23	X
MW5-15-3	2	GW-11206432-230301-WM-MW5-15-3	G	03/01/23	X
MW5-15-4	3	GW-11206432-230301-WM-MW5-15-4	G	03/01/23	X
MW2-14	3	GW-11206432-230302-JK-MW2-14	G	03/02/23	X
MW5-15-2	2	GW-11206432-230301-WM-MW5-15-2	G	03/01/23	X
MW5-15-5	3	GW-11206432-230301-WM-MW5-15-5	G	03/01/23	X
MW2-14	3	GW-11206432-230302-JK-DUP-1	DUP	03/02/23	X
MW1-14	1	GW-11206432-230302-JK-DUP-2	DUP	03/02/23	X
MW5-15-6	3	GW-11206432-230301-WM-DUP-3	DUP	03/01/23	X
MW22	1	GW-11206432-230302-JK-DUP-4	DUP	03/02/23	X

Notes:

G Grab Sample

DUP Field Duplicate

VOCs Volatile Organic Compounds

Layer 1 (Unconfined Sand), Layer 2 (Clay Aquitard), Layer 3 (Confined Sand)

**Summary of Groundwater Level Measurements and Elevations
2022-2023 Groundwater Monitoring Report
Former Millbrook Correctional Centre
706 County Road 21, Millbrook, ON**

Monitoring Well ID	UTM Coordinates		Ground Surface (mASL)	Top of Riser Elevation (mASL)	May 2022		August 2022		December 2022		March 2023	
	Northing	Easting			Depth to Groundwater (mbTOR)	Groundwater Elevation (mASL)	Depth to Groundwater (mbTOR)	Groundwater Elevation (mASL)	Depth to Groundwater (mbTOR)	Groundwater Elevation (mASL)	Depth to Groundwater (mbTOR)	Groundwater Elevation (mASL)
<i>Layer 1 (Unconfined Sand)</i>												
MW17	--	--	--	--	9.93	--	10.03	--	10.23	--	10.29	--
MW22	4891840.60	702799.00	261.14	261.98	--	--	16.48	245.50	16.65	245.33	16.70	245.28
MW37	4891755.79	702557.64	269.90	270.65	27.64	243.01	27.81	242.84	27.88	242.77	28.09	242.56
MW1-14	4891660.43	702713.44	274.53	275.34	27.78	247.56	27.87	247.47	28.05	247.29	28.12	247.22
MW4-15-1	4891590.00	702967.65	253.43	254.14	10.35	243.79	10.40	243.74	11.12	243.02	11.14	243.00
MW5-15-1	4891683.76	702949.73	262.45	263.17	17.39	245.78	17.79	245.38	18.23	244.94	--	--
<i>Layer 2 (Clay Aquitard)</i>												
MW4-15-2	4891590.00	702967.65	253.43	254.14	10.35	243.79	10.40	243.74	11.12	243.02	11.16	242.98
MW4-15-3	4891590.00	702967.65	253.43	254.14	10.88	243.26	11.47	242.67	11.12	243.02	11.13	243.01
MW5-15-2	4891683.76	702949.73	262.45	263.17	--	--	18.10	245.07	18.48	244.69	18.34	244.83
MW5-15-3	4891683.76	702949.73	262.45	263.17	17.67	245.50	18.11	245.06	18.48	244.69	18.34	244.83
<i>Layer 3 (Confined Sand)</i>												
MW2-14	4891504.98	702930.90	247.16	248.00	4.46	243.54	--	--	4.57	243.43	4.68	243.32
MW3-14	4891593.30	702970.88	253.14	253.97	10.69	243.28	10.53	243.44	10.74	243.23	10.82	243.15
MW4-15-4	4891590.00	702967.65	253.43	254.14	10.85	243.29	11.44	242.70	11.09	243.05	11.14	243.00
MW4-15-5	4891590.00	702967.65	253.43	254.14	10.85	243.29	11.46	242.68	11.10	243.04	9.63	244.51
MW4-15-6	4891590.00	702967.65	253.43	254.14	9.00	245.14	9.42	244.72	9.74	244.40	11.13	243.01
MW4-15-7	4891590.00	702967.65	253.43	254.14	10.85	243.29	11.44	242.70	11.08	243.06	11.13	243.01
MW5-15-4	4891683.76	702949.73	262.45	263.17	19.13	244.04	19.35	243.82	19.30	243.87	19.45	243.72
MW5-15-5	4891683.76	702949.73	262.45	263.17	19.62	243.55	19.55	243.62	19.77	243.40	19.92	243.25
MW5-15-6	4891683.76	702949.73	262.45	263.17	19.72	243.45	19.55	243.62	19.77	243.40	19.92	243.25
MW5-15-7	4891683.76	702949.73	262.45	263.17	20.00	243.17	20.00	243.17	20.16	243.01	20.17	243.00
MW6-16-1	4891655.27	702728.37	274.52	275.36	--	--	--	--	--	--	--	--
MW6-16-2	4891655.27	702728.37	274.52	275.36	--	--	--	--	--	--	--	--
MW6-16-3	4891655.27	702728.37	274.52	275.36	18.42	256.94	--	--	21.20	254.16	--	--
MW17-1	4891590.00	702962.74	253.96	254.62	11.19	243.43	--	--	11.23	243.39	11.36	243.26
MW17-2	4891590.00	702962.74	253.96	254.62	--	--	--	--	11.29	243.33	--	--

Notes:

- mASL metres above sea level
- mbTOR metres below top of riser
- Not recorded

GHD was unable to obtain an accurate elevation reading at MW17 due to dense tree cover at this location.

**Summary of Well Sampling Data
2022-2023 Groundwater Monitoring Report
Former Millbrook Correctional Centre
706 County Road 21, Millbrook, ON**

Well ID	Sample Date	pH	Conductivity (mS/cm)	Temperature (°C)	Turbidity (NTU)	
		± 0.1 Unit	±3 %	±3 %	±10 %	
MW22	05/19/22	--	--	--	--	
	08/22/22	7.65	0.632	11.68	1000+	
		7.61	0.631	11.72	1000+	
		7.59	0.632	11.69	878	
	12/06/22	6.92	0.646	7.50	922	
		6.92	0.642	7.58	987	
		6.93	0.522	7.10	1000+	
	03/02/23	7.75	0.521	7.48	32	
		7.75	0.518	7.50	25	
		7.76	0.522	7.50	28	
	MW37	05/19/22	7.98	0.561	8.93	29
			7.88	0.568	8.08	26.3
7.90			0.570	9.08	5	
08/22/22		7.69	0.588	12.59	152	
		7.67	0.586	12.11	767	
		7.65	0.588	11.99	644	
12/06/22		7.11	0.800	8.55	83	
		7.11	0.597	8.45	43	
		7.12	0.591	8.50	22	
03/02/23		7.69	0.538	6.42	65	
		7.70	0.529	6.40	38	
		7.70	0.535	6.40	26	
MW1-14	05/19/22	7.47	0.759	9.90	1000+	
		7.44	0.761	9.68	1000+	
		7.45	0.775	9.70	1000+	
	08/22/22	7.46	0.756	14.20	1000+	
		7.49	0.750	13.67	1000+	
		7.45	0.754	13.72	1000+	
	12/06/22	7.71	0.711	7.16	53	
		7.71	0.708	7.18	25	
		7.70	0.709	7.20	15	
	03/02/23	7.40	0.675	8.38	1000+	
		7.40	0.662	8.38	1000+	
		7.41	0.658	8.35	1000+	
MW2-14	05/19/22	7.30	0.502	8.76	35	
		7.23	0.503	8.49	23	
		7.25	0.505	8.50	4.5	
	08/22/22	6.34	0.497	13.31	85.4	
		6.29	0.498	13.27	85.7	
		6.29	0.498	12.98	31.3	
	12/06/22	--	0.504	8.97	45	
		--	0.506	9.04	39	
		--	0.504	8.95	28	
	03/02/23	7.55	0.466	6.08	18	
		7.55	0.458	6.12	15	
		7.55	0.456	6.15	15	
MW3-14	05/19/22	6.73	0.660	9.87	56.1	
		6.76	0.669	9.42	51	
		6.79	0.670	9.10	72.8	
	08/22/22	7.23	0.666	12.37	242	
		7.22	0.676	11.13	1000+	
		7.20	0.679	10.80	1000+	
	12/06/22	6.53	0.695	8.25	80	
		6.55	0.691	8.29	15	
		6.57	0.695	8.32	15	
	03/02/23	6.78	0.458	4.32	65	
		6.79	0.448	4.28	35	
		6.78	0.441	4.25	15	
MW17	05/19/22	7.96	0.409	8.09	775	
		7.81	0.413	7.25	1000+	
		7.78	0.413	7.13	1000+	
	08/22/22	8.40	0.384	14.64	1000+	
		8.31	0.376	11.52	1000+	
		8.24	0.376	10.82	1000+	
	12/06/22	7.40	0.394	7.77	197	
		7.17	0.430	7.19	1000+	

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Former Millbrook Correctional Centre
706 County Road 21, Millbrook, ON

Well ID	Sample Date	pH	Conductivity (mS/cm)	Temperature (°C)	Turbidity (NTU)	
		± 0.1 Unit	±3 %	±3 %	±10 %	
MW17	12/06/22	7.32	0.449	7.00	414	
	03/02/23	7.62	0.438	5.95	485	
		7.62	0.425	5.92	465	
		7.62	0.43	5.90	470	
MW17-1	05/19/22	7.08	0.461	9.17	43.3	
		7.09	0.461	8.89	13.1	
		7.06	0.468	9.81	4.5	
	08/22/22	7.14	0.598	12.99	354	
		7.14	0.584	12.46	363	
		7.17	0.572	12.79	363	
	12/06/22	6.82	0.520	7.43	220	
		6.84	0.506	7.59	177	
		6.85	0.498	7.58	196	
	03/02/23	7.59	0.442	4.85	265	
		7.60	0.438	4.82	268	
		7.60	0.430	4.80	269	
MW17-2	05/19/22	--	--	--	--	
	08/22/22	6.70	1.030	13.70	1000+	
		6.89	0.879	12.80	923	
		6.90	0.886	12.55	836	
	12/06/22	6.95	0.547	6.94	113	
		6.81	0.546	7.37	148	
		6.84	0.543	7.54	140	
	03/01/23	6.88	0.544	4.06	243	
		6.93	0.560	4.30	253	
		6.90	0.570	4.30	255	
	MW4-15-1	05/19/22	7.35	0.566	12.90	305
		08/22/22	8.49	0.521	21.07	240
8.33			0.506	21.53	180	
8.42			0.505	20.24	70	
12/06/22		8.34	0.467	8.48	85	
		8.34	0.459	8.48	35	
		8.35	0.449	8.48	22	
03/01/23		6.10	0.513	5.63	45.3	
		6.09	0.509	5.65	20.5	
		6.09	0.502	5.65	8.5	
MW4-15-2		05/19/22	--	--	--	--
		08/22/22	8.35	--	21.13	50
	8.40		0.461	21.03	70	
	8.18		0.483	20.98	140	
	12/06/22	8.27	0.427	7.38	114	
	03/01/23	6.15	0.485	3.98	35	
		6.15	0.488	3.98	12	
		6.15	0.483	3.99	5	
MW4-15-3	05/19/22	--	--	--	--	
	08/22/22	8.14	0.542	20.42	150	
	12/06/22	8.55	0.218	7.25	71	
	03/01/23	6.84	0.495	5.37	38	
		6.85	0.493	5.38	24	
6.84	0.488	5.39	18			
MW4-15-4	05/19/22	7.20	0.476	10.52	85.4	
		7.20	0.432	10.48	78.9	
		7.21	0.441	10.32	4.6	
	08/22/22	8.20	0.483	18.01	135	
		12/06/22	8.07	0.454	7.58	57
		8.05	0.461	7.49	35	
	8.05	0.458	7.50	22		
		03/01/23	6.76	0.494	4.97	36
			6.75	0.494	4.98	22
	6.74		0.494	4.98	8	
	MW4-15-5	05/19/22	7.27	0.478	11.40	18.5
			7.26	0.476	11.20	8.2
7.28			0.459	11.80	4.8	
08/22/22		7.88	-	20.10	250	
		8.13	0.209	20.20	170	
		8.10	0.232	20.30	57	

Summary of Well Sampling Data
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Former Millbrook Correctional Centre
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Well ID	Sample Date	pH	Conductivity (mS/cm)	Temperature (°C)	Turbidity (NTU)
		± 0.1 Unit	±3 %	±3 %	±10 %
MW4-15-5	12/06/22	8.08	0.458	7.15	42
		8.07	0.451	7.14	21
		8.08	0.448	7.15	16
	03/01/23	--	--	--	--
MW4-15-6	05/19/22	7.18	0.980	11.50	8
	08/22/22	8.19	0.472	17.48	147
	12/06/22	8.01	0.421	7.29	56
		8.01	0.418	7.25	10
		8.01	0.415	7.25	9
03/01/23	--	--	--	--	
MW4-15-7	05/19/22	7.16	0.529	10.64	13.3
		7.15	0.531	10.54	22.3
		7.16	0.544	10.58	5
	08/22/22	7.91	0.522	18.49	200
		7.91	0.500	18.85	210
		8.04	0.508	18.79	209
	12/06/22	--	--	--	--
	03/01/23	--	--	--	--
MW5-15-1	05/19/22	--	--	--	--
	08/22/22	8.24	0.531	20.34	210
	12/06/22	--	--	--	--
	03/01/23	--	--	--	--
MW5-15-2	05/19/22	--	--	--	--
	08/22/22	8.30	0.238	20.34	1000+
	12/06/22	--	--	--	--
	03/01/23	6.35	0.475	3.78	108
		6.38	0.469	3.75	65
6.35	0.460	3.76	35		
MW5-15-3	05/19/22	--	--	--	--
	08/22/22	--	--	--	--
	12/06/22	--	--	--	--
	03/01/23	--	--	--	--
MW5-15-4	05/19/22	6.15	0.865	10.70	13
		6.15	0.858	10.50	8
		6.15	0.852	10.50	4
	08/22/22	8.36	0.988	20.75	180
	12/06/22	8.03	0.455	7.67	125
	03/01/23	6.24	0.948	4.10	225
MW5-15-5	05/19/22	5.81	0.576	10.30	32
		5.85	0.578	10.50	15
		5.85	0.580	10.50	5
	08/22/22	8.17	0.653	18.41	170
		8.05	0.614	18.58	100
	12/06/22	8.02	0.638	6.30	73
	03/01/23	6.72	0.634	5.60	240
		6.75	0.622	5.55	185
MW5-15-6	05/19/22	6.38	0.567	12.60	15
		6.38	0.552	11.10	8
		6.39	0.564	11.20	4
	08/22/22	8.22	--	20.54	650
	12/06/22	--	--	--	--
	03/01/23	6.68	0.236	5.08	250
		6.68	0.229	5.10	185
6.69		0.225	5.12	138	
MW5-15-7	05/19/22	6.78	1.150	11.20	26
		6.77	1.130	11.50	12
		6.78	1.130	11.60	4
	08/22/22	8.16	0.835	20.04	320
	12/06/22	7.99	0.629	7.05	180
	03/01/23	6.70	0.629	5.92	250

Notes:

mS/cm milliSiemens per centimetre -- Data Not Recorded
°C degrees Celcius
NTU Nephelometric Turbidity Units
Certain parameters could not be stabilized at the time of sample collection due to low recharge.

Table 4A

Summary of Groundwater Analytical Results - Layer 1
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location: CMT_Port_Level: Layer: Sample Date:	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	11/18/2014	01/08/2015	05/01/2015	07/29/2015	10/27/2015	01/15/2016	03/01/2016	05/04/2016	08/03/2016	11/10/2016	02/22/2017	05/16/2017	08/21/2017	11/16/2017	03/20/2018	06/13/2018	10/02/2018	05/09/2019	08/08/2019	10/29/2019	04/16/2020	09/03/2020			
Parameters	Units	MECP Table 2	ODWQS																						
Tetrachloroethene	ug/L	1.6	10	IS	1.3	IS	IS	0.31	0.90	NS	IS	IS	0.98	1.9	1.0	IS	0.80	1.0	1.3	1.3	2.1	1.0	1.1	ND(0.50)	0.91
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.20)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.10)	NS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.20)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.20)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.10)	NS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.10)	NS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.20)	NS	IS	IS	ND(0.20)	ND(0.2)	ND(0.2)	IS	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.20)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.20)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.10)	NS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.20)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.20)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	IS	ND(10)	IS	IS	ND(10)	ND(5.0)	NS	IS	IS	ND(10)	ND(20)	ND(20)	IS	ND(20)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	IS	ND(5.0)	IS	IS	ND(5.0)	ND(5.0)	NS	IS	IS	ND(5.0)	ND(20)	ND(20)	IS	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	IS	ND(10)	IS	IS	ND(10)	ND(10)	NS	IS	IS	ND(10)	ND(30)	ND(30)	IS	ND(30)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)
Benzene	ug/L	5	1	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.10)	NS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.10)	NS	IS	IS	ND(0.50)	ND(2)	ND(2)	IS	ND(2)	ND(0.05)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)
Bromoform	ug/L	25	n/a	IS	ND(1.0)	IS	IS	ND(1.0)	ND(0.20)	NS	IS	IS	ND(1.0)	ND(5)	ND(5)	IS	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(5.0)
Carbon tetrachloride	ug/L	0.79	2	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.10)	NS	IS	IS	ND(0.20)	ND(0.2)	ND(0.2)	IS	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.10)	NS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.10)	NS	IS	IS	ND(0.20)	ND(1)	ND(1)	IS	ND(1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.10)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	IS	ND(0.30)	IS	IS	ND(0.30)	ND(0.20)	NS	IS	IS	ND(0.30)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.28)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Dibromochloromethane	ug/L	25	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.20)	NS	IS	IS	ND(0.50)	ND(2)	ND(2)	IS	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	IS	ND(1.0)	IS	IS	ND(1.0)	ND(0.50)	NS	IS	IS	ND(1.0)	ND(2)	ND(2)	IS	ND(2)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)
Ethylbenzene	ug/L	2.4	140	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.10)	NS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)
Hexane	ug/L	51	n/a	IS	ND(1.0)	IS	IS	ND(1.0)	ND(0.50)	NS	IS	IS	ND(1.0)	ND(5)	ND(5)	IS	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	IS	0.21	IS	IS	0.21	0.18	NS	IS	IS	ND(0.20)	ND(1.0)	ND(1.0)	IS	ND(1.0)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.20)	NS	IS	IS	ND(0.50)	ND(2)	ND(2)	IS	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)
Methylene chloride	ug/L	50	50	IS	ND(2.0)	IS	IS	ND(2.0)	ND(0.50)	NS	IS	IS	ND(2.0)	ND(5)	ND(5)	IS	ND(5)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5.0)	ND(5.0)
o-Xylene	ug/L	n/a	n/a	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.10)	NS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.30)	ND(0.30)
Styrene	ug/L	5.4	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.20)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	IS	ND(0.20)	IS	IS	0.23	ND(0.20)	NS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	ND(0.10)	NS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	IS	ND(0.40)	IS	IS	ND(0.40)	ND(0.20)	NS	IS	IS	ND(0.40)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.30)	ND(0.30)
Trichloroethene	ug/L	1.6	5	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.10)	NS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	IS	ND(0.50)	IS	IS	ND(0.50)	0.33	NS	IS	IS	2	ND(5)	ND(5)	IS	9	6.4	9.3	10	18	9.9	12	ND(5.0)	8.7
Vinyl chloride	ug/L	0.5	1	IS	ND(0.20)	IS	IS	ND(0.20)	ND(0.20)	NS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	IS	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)
Xylenes (total)	ug/L	300	90	IS	0.21	IS	IS	0.21	0.18	NS	IS	IS	ND(0.20)	ND(1.1)	ND(1										

Table 4A

Summary of Groundwater Analytical Results - Layer 1
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW1-14	MW17	MW17	MW17		
CMT_Port_Level:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Layer:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Sample Date:	10/22/2020	01/19/2021	05/04/2021	05/04/2021	08/03/2021	11/02/2021	05/19/2022	05/19/2022	05/19/2022	05/19/2022	05/19/2022	05/19/2022	05/19/2022	05/19/2022	05/19/2022	05/19/2022	08/22/2022	08/22/2022	08/22/2022		
Parameters	Units	MECP Table 2	ODWQS																		
Tetrachloroethene	ug/L	1.6	10	1.29 OWP	2.17	ND(0.50)	ND(0.50)	0.70	0.55 OWP	1.03	0.91	ND(0.50)	ND(0.50)	0.69	0.65	1.08	1.06	ND(0.20)	ND(0.20)	ND(0.20)	
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.30)	ND(0.30)	ND(0.30)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.30)	ND(0.30)	ND(0.30)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.30)	ND(0.30)	ND(0.30)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20) OWP	ND(20)	ND(20)	ND(20)	542	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(1.0)	ND(1.0)	ND(1.0)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(1.0)	ND(1.0)	ND(1.0)
Acetone	ug/L	2700	n/a	ND(30) OWP	ND(30)	ND(30)	ND(30)	2,660 DLHC	ND(30) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(1.0)	ND(1.0)	ND(1.0)
Benzene	ug/L	5	1	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
Bromodichloromethane	ug/L	16	n/a	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
Bromoform	ug/L	25	n/a	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0) OWP	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.20)	ND(0.20)	NA
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)
Dibromochloromethane	ug/L	25	n/a	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
Ethylbenzene	ug/L	2.4	140	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)
Hexane	ug/L	51	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.20)	ND(0.20)	ND(0.20)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
Methylene chloride	ug/L	50	50	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.30)	ND(0.30)	ND(0.30)
o-Xylene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.10)	ND(0.10)	ND(0.10)
Styrene	ug/L	5.4	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)
Toluene	ug/L	24	60	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	NA
Trichloroethene	ug/L	1.6	5	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	1.65	1.66	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	6.9 OWP	13.7	7.0	7.4	5.4	9.3 OWP	6.27	6.17	0.75	0.69	12.2	11.8	7.23	7.59	ND(0.40)	ND(0.40)	ND(0.40)	
Vinyl chloride	ug/L	0.5	1	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.17)	ND(0.17)	ND(0.17)
Xylenes (total)	ug/L	300	90	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)

Footnotes:

- 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
- 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
- 3) ODWQS - Ontario Drinking Water Quality Standards
- 4) ND(0.50) - Parameter not detected at value stated in parenthesis
- 5) ND - Not detected at the associated reporting limit
- 6) IS - Insufficient Sample
- 7) NS - Not Sampled
- 8) - indicates no value established
- 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
- 10) OWP - Organic water sample contained visible sediment (must be included as part of analysis). Measured

Table 4A

Summary of Groundwater Analytical Results - Layer 1
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	
CMT_Port_Level:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Layer:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sample Date:	11/18/2014	05/21/2015	07/28/2015	10/27/2015	01/13/2016	03/01/2016	05/03/2016	08/02/2016	11/09/2016	02/22/2017 Duplicate	02/22/2017	05/16/2017	08/21/2017	11/16/2017	03/20/2018	06/13/2018	10/02/2018	05/15/2019	08/09/2019	10/28/2019			
Parameters	Units	MECP Table 2	ODWQS																				
Tetrachloroethene	ug/L	1.6	10	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(10)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	NS	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	NS	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Acetone	ug/L	2700	n/a	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	NS	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Benzene	ug/L	5	1	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.10)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	25	n/a	ND(1.0)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.20)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.39
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.10)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.20)	ND(0.20)	ND(0.30)	ND(0.20)	NS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.28)	ND(0.28)	ND(0.50)	ND(0.28)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	0.53
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(1.0)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	2.4	140	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Hexane	ug/L	51	n/a	ND(1.0)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.20)	0.28	ND(0.10)	ND(0.20)	0.15	NS	ND(0.20)	ND(0.20)	0.24	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Methylene chloride	ug/L	50	50	ND(2.0)	ND(0.50)	ND(0.50)	ND(2.0)	ND(0.50)	NS	ND(2.0)	ND(2.0)	ND(2.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
o-Xylene	ug/L	n/a	n/a	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.20)	0.29	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	0.26	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.10)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	NS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)
Trichloroethene	ug/L	1.6	5	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Xylenes (total)	ug/L	300	90	ND(0.20)	0.28	ND(0.10)	ND(0.20)	0.15	NS														

Table 4A

Summary of Groundwater Analytical Results - Layer 1
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	MW22	
CMT_Port_Level:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Layer:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sample Date:	10/26/2015	01/14/2016	03/01/2016	05/03/2016	08/03/2016	11/09/2016	02/22/2017	05/16/2017	08/21/2017	11/16/2017	03/20/2018	06/13/2018	10/02/2018	05/15/2019	08/09/2019	10/28/2019	04/16/2020	09/03/2020	10/22/2020	01/19/2021			
Parameters	Units	MECP Table 2	ODWQS																				
Tetrachloroethene	ug/L	1.6	10	ND(0.20)	0.11	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	0.21	ND(0.20)	0.21	0.22	0.28	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP						
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP						
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP						
1,1-Dichloroethane	ug/L	5	n/a	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP
1,1-Dichloroethene	ug/L	1.6	14	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) OWP						
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP						
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP						
1,2-Dichloropropane	ug/L	5	n/a	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP						
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP						
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(10)	ND(5.0)	NS	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20) OWP
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(5.0)	ND(5.0)	NS	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20) OWP
Acetone	ug/L	2700	n/a	ND(10)	ND(10)	NS	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30) OWP
Benzene	ug/L	5	1	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.10)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP
Bromoforn	ug/L	25	n/a	ND(1.0)	ND(0.20)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP						
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) OWP						
Chlorobenzene	ug/L	30	80	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(1)	ND(1)	ND(1)	ND(1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0) OWP
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.10)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP						
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.20)	NS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP						
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.28)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	--						
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(1.0)	ND(0.50)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(2)	ND(2)	ND(2)	ND(2)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP
Ethylbenzene	ug/L	2.4	140	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP
Hexane	ug/L	51	n/a	ND(1.0)	ND(0.50)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP
m&p-Xylenes	ug/L	n/a	n/a	ND(0.20)	0.32	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40) OWP
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP
Methylene chloride	ug/L	50	50	ND(2.0)	ND(0.50)	NS	ND(2.0)	ND(2.0)	ND(2.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP
o-Xylene	ug/L	n/a	n/a	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP						
Toluene	ug/L	24	60	ND(0.20)	0.27	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.10)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP						
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40)	ND(0.20)	NS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP
Trichloroethene	ug/L	1.6	5	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP
Vinyl chloride	ug/L	0.5	1	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)			

Table 4A

Summary of Groundwater Analytical Results - Layer 1
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location: CMT_Port_Level: Layer: Sample Date:	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW22 -	MW37 -	MW37 -	MW37 -	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	05/04/2021	05/04/2021 Duplicate	08/03/2021	11/02/2021	02/08/2022	05/19/2022	05/19/2022 Duplicate	08/22/2022	08/22/2022 Duplicate	12/06/2022	12/06/2022 Duplicate	03/02/2023	03/02/2023 Duplicate	08/29/2011	11/25/2014	05/21/2015				
Parameters	Units	MECP Table 2	ODWQS																	
Tetrachloroethene	ug/L	1.6	10	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.10)	0.14	
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10) / ND(0.10)	ND(0.20)	ND(0.20)	
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.30) / ND(0.30)	ND(0.10)	ND(0.10)	
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10) / ND(0.10)	ND(0.20)	ND(0.20)	
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.30) / ND(0.30)	ND(0.10)	ND(0.10)	
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.30) / ND(0.30)	ND(0.10)	ND(0.10)	
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10) / ND(0.10)	ND(0.20)	ND(0.20)	
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.10)	ND(0.10)	
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10) / ND(0.10)	ND(0.20)	ND(0.20)	
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10) / ND(0.10)	ND(0.20)	ND(0.20)	
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(1.0) / ND(1.0)	ND(5.0)	ND(5.0)	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(1.0) / ND(1.0)	ND(5.0)	ND(5.0)	
Acetone	ug/L	2700	n/a	ND(30)	ND(30)	ND(30) OWP	ND(30) OWP	ND(30) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(1.0) / ND(1.0)	ND(10)	ND(10)	
Benzene	ug/L	5	1	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.10)	ND(0.10)	
Bromodichloromethane	ug/L	16	n/a	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.10)	ND(0.10)	
Bromoform	ug/L	25	n/a	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10) / ND(0.10)	ND(0.20)	ND(0.20)	
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.50)	ND(0.50)	
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.10)	ND(0.10)	
Chlorobenzene	ug/L	30	80	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10) / ND(0.10)	ND(0.10)	ND(0.10)	
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0)	ND(1.0)	5.0 OWP	4.8 OWP	ND(1.0) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	1.13	1.09	ND(0.20) / ND(0.20)	ND(0.10)	ND(0.10)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.10)	ND(0.10)	
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	NA/NA	ND(0.20)	ND(0.20)	
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5) OWP	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30) / ND(0.30)	ND(0.28)	ND(0.28)	
Dibromochloromethane	ug/L	25	n/a	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10) / ND(0.10)	ND(0.20)	ND(0.20)	
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.50)	ND(0.50)	
Ethylbenzene	ug/L	2.4	140	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10) / ND(0.10)	ND(0.10)	ND(0.10)	
Hexane	ug/L	51	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.50)	ND(0.50)	
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.40) OWP	ND(0.40) OWP	ND(0.40) OWP	ND(0.40)	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.20) / ND(0.20)	0.12	ND(0.10)	
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	
Methylene chloride	ug/L	50	50	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(1.0)	ND(1.0) OWP	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.30) / ND(0.30)	ND(0.50)	ND(0.50)	
o-Xylene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.10) / ND(0.10)	ND(0.10)	ND(0.10)	
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10) / ND(0.10)	ND(0.20)	ND(0.20)	
Toluene	ug/L	24	60	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / 0.34	ND(0.20)	ND(0.20)	
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.10)	ND(0.10)	
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	NA/NA	ND(0.20)	ND(0.20)	
Trichloroethene	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	ND(0.10)	ND(0.10)	
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.40) / ND(0.40)	ND(0.20)	ND(0.20)	
Vinyl chloride	ug/L	0.5	1	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.17) / ND(0.17)	ND(0.20)	ND(0.20)	
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20) / ND(0.20)	0.12	ND(0.10)	

Footnotes:

- 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
- 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
- 3) ODWQS - Ontario Drinking Water Quality Standards
- 4) ND(0.50) - Parameter not detected at value stated in parenthesis
- 5) ND - Not detected at the associated reporting limit
- 6) IS - Insufficient Sample
- 7) NS - Not Sampled
- 8) - indicates no value established
- 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
- 10) OWP - 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.

Table 4A

Summary of Groundwater Analytical Results - Layer 1
N-00596 Former Millbrook Correctional Centre
706 County Road 21
Millbrook, Ontario
Infrastructure Ontario

Sample Location:	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37	MW37
CMT_Port_Level:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Layer:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sample Date:	07/28/2015	10/26/2015	01/16/2016	03/01/2016	05/04/2016	08/03/2016	11/11/2016	02/22/2017	05/16/2017	08/21/2017	11/16/2017	03/20/2018	06/13/2018	10/02/2018	05/15/2019	08/09/2019	10/29/2019	4/17/2020	9/3/2020	10/22/2020			
Parameters	Units	MECP Table 2	ODWQS																				
Tetrachloroethene	ug/L	1.6	10	0.15	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.20)	ND(0.50)	ND(0.20)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.20)	ND(0.50)	ND(0.20)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.20)	ND(0.50)	ND(0.20)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.20)	ND(0.50)	ND(0.20)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.20)	ND(0.50)	ND(0.20)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.20)	ND(0.50)	ND(0.20)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.20)	ND(0.50)	ND(0.20)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(5.0)	ND(10)	ND(5.0)	NS	Dry	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	IS	IS	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(5.0)	ND(5.0)	ND(5.0)	NS	Dry	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	IS	IS	ND(20)
Acetone	ug/L	2700	n/a	ND(10)	ND(10)	ND(10)	NS	Dry	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	IS	IS	ND(30)
Benzene	ug/L	5	1	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(0.10)	ND(0.50)	ND(0.10)	NS	Dry	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(2.0)
Bromoform	ug/L	25	n/a	ND(0.20)	ND(1.0)	ND(0.20)	NS	Dry	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	IS	IS	ND(5.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(1)	ND(1)	ND(1)	ND(1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(1.0)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.10)	ND(0.50)	ND(0.10)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.20)	ND(0.30)	ND(0.20)	NS	Dry	ND(0.30)	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	IS	IS	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.28)	ND(0.50)	ND(0.28)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
Dibromochloromethane	ug/L	25	n/a	ND(0.20)	ND(0.50)	ND(0.20)	NS	Dry	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(2.0)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(0.50)	ND(1.0)	ND(0.50)	NS	Dry	ND(1.0)	ND(1.0)	ND(2)	ND(2)	ND(2)	ND(2)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	IS	IS	ND(2.0)
Ethylbenzene	ug/L	2.4	140	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)
Hexane	ug/L	51	n/a	ND(0.50)	ND(1.0)	ND(0.50)	NS	Dry	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	IS	IS	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.20)	ND(0.50)	ND(0.20)	NS	Dry	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(2.0)
Methylene chloride	ug/L	50	50	ND(0.50)	ND(2.0)	ND(0.50)	NS	Dry	ND(2.0)	ND(2.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	IS	IS	ND(5.0)
o-Xylene	ug/L	n/a	n/a	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.20)	ND(0.50)	ND(0.20)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
Toluene	ug/L	24	60	ND(0.20)	ND(0.20)	0.39	NS	Dry	0.29	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	0.91
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.10)	ND(0.50)	ND(0.10)	NS	Dry	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.20)	ND(0.40)	ND(0.20)	NS	Dry	ND(0.40)	ND(0.40)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	IS	IS	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.20)	ND(0.50)	ND(0.20)	NS	Dry	ND(0.50)	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	0.54	0.65	0.55	IS
Vinyl chloride	ug/L	0.5	1	ND(0.20)	ND(0.20)	ND(0.20)	NS	Dry	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(0.10)	ND(0.20)	ND(0.10)	NS	Dry	ND(0.20)	ND(0.20)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)

Footnotes:

- 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
- 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
- 3) ODWQS - Ontario Drinking Water Quality Standards
- 4) ND(0.50) - Parameter not detected at value stated in parenthesis
- 5) ND - Not detected at the associated reporting limit
- 6) IS - Insufficient Sample
- 7) NS - Not Sampled
- 8) - indicates no value established
- 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
- 10) OWP - Organic water sample contained visible sediment (must be included as part of analysis

Summary of Groundwater Analytical Results - Layer 1
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW5-15	MW5-15	MW5-15	MW5-15													
CMT_Port_Level:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Layer:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sample Date:	11/03/2021	02/09/2022	05/19/2022	08/23/2022	12/06/2022	03/01/2023	08/25/2015	10/27/2015	01/01/2016	03/21/2016	05/04/2016	08/03/2016	11/14/2016	02/23/2017	05/24/2017	08/23/2017	11/16/2017	03/22/2018	06/14/2018	11/07/2018			
Parameters	Units	MECP Table 2	ODWQS																				
Tetrachloroethene	ug/L	1.6	10	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(10)	IS	IS	IS	IS	IS	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	ND(10)	ND(10)	ND(10)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(5.0)	IS	IS	IS	IS	IS	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)
Acetone	ug/L	2700	n/a	ND(30) OWP	ND(30) OWP	ND(20)	ND(20)	ND(20)	ND(20)	12	IS	IS	IS	IS	IS	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	ND(10)	ND(10)	ND(10)
Benzene	ug/L	5	1	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
Bromodichloromethane	ug/L	16	n/a	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	0.57	IS	IS	IS	IS	IS	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	25	n/a	ND(5.0) OWP	ND(5.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	IS	IS	IS	IS	IS	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0) OWP	ND(1.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	1.8	IS	IS	IS	IS	IS	ND(0.20)	ND(1)	ND(1)	ND(1)	ND(1)	ND(0.20)	ND(0.20)	ND(0.20)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	IS	IS	IS	IS	IS	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
Dibromochloromethane	ug/L	25	n/a	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	IS	IS	IS	IS	IS	ND(1.0)	ND(2)	ND(2)	ND(2)	ND(2)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	2.4	140	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
Hexane	ug/L	51	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	IS	IS	IS	IS	IS	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40) OWP	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.20)	ND(0.20)	ND(0.20)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)
Methylene chloride	ug/L	50	50	ND(5.0) OWP	ND(5.0) OWP	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	IS	IS	IS	IS	IS	ND(2.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(2.0)	ND(2.0)	ND(2.0)
o-Xylene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
Styrene	ug/L	5.4	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.40)	IS	IS	IS	IS	IS	ND(0.40)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.40)	ND(0.40)	ND(0.40)
Trichloroethene	ug/L	1.6	5	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5.0) OWP	ND(5.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	IS	IS	IS	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	ND(0.50)	ND(0.50)	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	IS	IS	IS	IS	ND(0.20)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	ND(0.20)	ND(0.20)	ND(0.20)

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established
 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
 10) OWP - 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.

Table 4A
Summary of Groundwater Analytical Results - Layer 1
N-00596 Former Millbrook Correctional Centre
706 County Road 21
Millbrook, Ontario
Infrastructure Ontario

Sample Location:	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15
CMT_Port_Level:	1	1	1	1	1	1	1	1	1
Layer:	1	1	1	1	1	1	1	1	1
Sample Date:	05/09/2019	08/07/2019	10/28/2019	10/29/2019	4/17/2020	9/3/2020	10/22/2020	02/09/2022	08/23/2022

Parameters	Units	MECP Table 2	ODWQS	MW5-15								
Tetrachloroethene	ug/L	1.6	10	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(10)	ND(10)	ND(10)	ND(10)	IS	IS	ND(20)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	IS	IS	ND(20)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	ND(10)	12	ND(10)	ND(10)	IS	IS	ND(30)	ND(30)	ND(20)
Benzene	ug/L	5	1	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(2.0)	ND(2.0)	ND(0.50)
Bromoform	ug/L	25	n/a	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	IS	IS	ND(5.0)	ND(5.0)	ND(0.50)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(1.0)	ND(1.0)	ND(0.50)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	IS	IS	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.5)
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(2.0)	ND(2.0)	ND(0.50)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	IS	IS	ND(2.0)	ND(2.0)	ND(0.50)
Ethylbenzene	ug/L	2.4	140	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
Hexane	ug/L	51	n/a	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.40)	ND(0.40)	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(2.0)	ND(2.0)	ND(0.50)
Methylene chloride	ug/L	50	50	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	IS	IS	ND(5.0)	ND(5.0)	ND(1.0)
o-Xylene	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.30)	ND(0.30)	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	IS	IS	ND(0.30)	ND(0.30)	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(5.0)	ND(5.0)	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	ND(0.50)	ND(0.50)

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established
 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
 10) OWP - 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.

Summary of Groundwater Analytical Results - Layer 2
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:		MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15
CMT_Port_Level:		2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3
Layer:		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Sample Date:		07/29/2015	10/26/2015	01/01/2016	03/21/2016	05/04/2016	08/01/2016	08/03/2016	11/09/2016	02/23/2017	02/23/2017	05/24/2017	08/23/2017	11/13/2017	12/01/2017	03/21/2018	06/12/2018	10/03/2018	05/10/2019	08/08/2019	10/28/2019	
Parameters	Units	MECP Table 2	ODWQS								Duplicate											
Tetrachloroethene	ug/L	1.6	10	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(10)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(10)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(10)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,1-Dichloroethene	ug/L	1.6	14	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(10)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(10)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(10)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(10)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(10)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(250)	19	NS	ND(10)	ND(10)	IS	Dry	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(250)	ND(5.0)	NS	ND(5.0)	ND(5.0)	IS	Dry	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Acetone	ug/L	2700	n/a	ND(500)	39	NS	20	18	IS	Dry	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)
Benzene	ug/L	5	1	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Bromodichloromethane	ug/L	16	n/a	ND(5.0)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	25	n/a	ND(10)	ND(1.0)	NS	ND(1.0)	ND(1.0)	IS	Dry	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(25)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(5.0)	1.3	NS	0.75	0.6	IS	Dry	0.38	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(5.0)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(10)	ND(0.30)	NS	ND(0.30)	ND(0.30)	IS	Dry	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(14)	ND(0.50)	NS	ND(0.5)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Dibromochloromethane	ug/L	25	n/a	ND(10)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(25)	ND(1.0)	NS	ND(1.0)	ND(1.0)	IS	Dry	ND(1.0)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	2.4	140	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Hexane	ug/L	51	n/a	ND(25)	ND(1.0)	NS	ND(1.0)	ND(1.0)	IS	Dry	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
m&p-Xylenes	ug/L	n/a	n/a	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.20)	0.21	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(10)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Methylene chloride	ug/L	50	50	ND(25)	ND(2.0)	NS	ND(2.0)	ND(2.0)	IS	Dry	ND(2.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
o-Xylene	ug/L	n/a	n/a	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Styrene	ug/L	5.4	n/a	ND(10)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(10)	0.36	NS	0.22	ND(0.20)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	0.21	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(5.0)	ND(0.50)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(10)	ND(0.40)	NS	ND(0.40)	ND(0.40)	IS	Dry	ND(0.40)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)
Trichloroethene	ug/L	1.6	5	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(10)	ND(0.50)	NS	ND(0.20)	ND(0.50)	IS	Dry	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	ND(5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(10)	ND(0.20)	NS	ND(0.50)	ND(0.50)	IS	Dry	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Xylenes (total)	ug/L	300	90	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	IS	Dry	ND(0.20)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	ND(0.20)	0.21	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established

Summary of Groundwater Analytical Results - Layer 2
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15
CMT_Port_Level:	2&3	2&3	2&3	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2	3
Layer:	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Sample Date:	08/18/2020	10/22/2020	01/19/2021	06/01/2021	06/01/2021	08/04/2021	08/04/2021	11/03/2021	11/03/2021	02/09/2022	02/09/2022	05/19/2022	05/19/2022	08/23/2022	08/23/2022	12/06/2022			
Parameters	Units	MECP Table 2	ODWQS																
Tetrachloroethene	ug/L	1.6	10	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)						
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)						
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)						
Acetone	ug/L	2700	n/a	ND(30)	ND(30) OWP	ND(30) OWP	ND(30)	ND(30)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)						
Benzene	ug/L	5	1	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Bromodichloromethane	ug/L	16	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Bromoform	ug/L	25	n/a	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)						
Chlorobenzene	ug/L	30	80	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0)	ND(1.0) OWP	ND(1.0) OWP	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)						
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Dibromochloromethane	ug/L	25	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Ethylbenzene	ug/L	2.4	140	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Hexane	ug/L	51	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)	ND(0.40) OWP	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)						
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Methylene chloride	ug/L	50	50	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)						
o-Xylene	ug/L	n/a	n/a	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)						
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Toluene	ug/L	24	60	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)						
Trichloroethene	ug/L	1.6	5	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Vinyl chloride	ug/L	0.5	1	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established

Summary of Groundwater Analytical Results - Layer 2
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW4-15	MW4-15	MW4-15	MW5-15	MW5-15	MW5-15															
CMT_Port_Level:	3	2	3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	2&3	
Layer:	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Sample Date:	12/06/2022	03/01/2023	03/01/2023	08/25/2015	10/27/2015	01/01/2016	03/21/2016	05/04/2016	08/03/2016	11/14/2016	02/23/2017	05/24/2017	08/23/2017	11/16/2017	12/01/2017	03/22/2018	06/14/2018	11/07/2018			
Parameters	Units	MECP Table 2	ODWQS																		
Tetrachloroethene	ug/L	1.6	10	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	NS	0.24	ND(0.20)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	NS	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	NS	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	NS	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	NS	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	NS	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	NS	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20)	ND(20)	ND(10)	IS	NS	13	ND(10)	IS	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	NS	ND(10)	ND(10)	ND(10)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20)	ND(20)	ND(5.0)	IS	NS	ND(5.0)	ND(5.0)	IS	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	NS	ND(5.0)	ND(5.0)	ND(5.0)
Acetone	ug/L	2700	n/a	ND(20)	ND(20)	ND(20)	ND(10)	IS	NS	ND(10)	ND(10)	IS	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	NS	ND(10)	ND(10)	ND(10)
Benzene	ug/L	5	1	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	NS	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	0.5	ND(0.50)	IS	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	IS	NS	ND(1.0)	ND(1.0)	IS	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	NS	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	NS	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	NS	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	1.3	IS	NS	1.5	0.49	IS	0.29	ND(1)	ND(1)	ND(1)	ND(1)	NS	ND(0.20)	ND(0.20)	ND(0.20)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	IS	NS	ND(0.30)	ND(0.30)	IS	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	IS	NS	ND(1.0)	ND(1.0)	IS	ND(1.0)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	2.4	140	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	NS	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
Hexane	ug/L	51	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	IS	NS	ND(1.0)	ND(1.0)	IS	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(1.0)	ND(1.0)	ND(1.0)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.20)	IS	NS	0.22	ND(0.20)	IS	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	NS	ND(0.20)	ND(0.20)	ND(0.20)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)
Methylene chloride	ug/L	50	50	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	IS	NS	ND(2.0)	ND(2.0)	IS	ND(2.0)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(2.0)	ND(2.0)	ND(2.0)
o-Xylene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.20)	IS	NS	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	1.8	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	0.8	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.50)	ND(0.50)	ND(0.50)	0.29	IS	NS	0.31	ND(0.20)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.40)	IS	NS	ND(0.40)	ND(0.40)	IS	ND(0.40)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.40)	ND(0.40)	ND(0.40)
Trichloroethene	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	NS	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	IS	NS	ND(0.50)	ND(0.20)	IS	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(0.50)	ND(0.50)	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	NS	ND(0.20)	ND(0.50)	IS	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	IS	NS	0.22	ND(0.20)	IS	ND(0.20)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	NS	ND(0.20)	ND(0.20)	ND(0.20)

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established

Summary of Groundwater Analytical Results - Layer 2
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	
CMT_Port_Level:	2&3	2&3	2&3	2&3	2&3	2&3	2&3	3	3	3	2	3	2	3	2	3	2	3	
Layer:	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Sample Date:	05/09/2019	08/07/2019	10/29/2019	5/7/2020	8/12/2020	10/22/2020	01/19/2021	06/01/2021	08/04/2021	11/03/2021	02/09/2022	02/09/2022	08/23/2022	08/23/2022	03/01/2023	03/01/2023			
Parameters	Units	MECP Table 2	ODWQS																
Tetrachloroethene	ug/L	1.6	10	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(10)	ND(10)	ND(10)	IS	IS	ND(20)	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(5.0)	ND(5.0)	ND(5.0)	IS	IS	ND(20)	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	ND(10)	ND(10)	ND(10)	IS	IS	ND(30)	ND(30)	ND(30)	ND(30) OWP	ND(30) OWP	ND(30)	ND(30) OWP	ND(20)	ND(20)	ND(20)	ND(20)
Benzene	ug/L	5	1	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(2)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	25	n/a	ND(1.0)	ND(1.0)	ND(1.0)	IS	IS	ND(5)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(1)	1.4	ND(1.0)	ND(1.0) OWP	ND(1.0) OWP	ND(1.0)	ND(1.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	IS	IS	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(2)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(1.0)	ND(1.0)	ND(1.0)	IS	IS	ND(2)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Ethylbenzene	ug/L	2.4	140	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Hexane	ug/L	51	n/a	ND(1.0)	ND(1.0)	ND(1.0)	IS	IS	ND(5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(1.0)	ND(0.40)	ND(0.40)	ND(0.40) OWP	ND(0.40) OWP	ND(0.40)	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(2)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Methylene chloride	ug/L	50	50	ND(2.0)	ND(2.0)	ND(2.0)	IS	IS	ND(5)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0) OWP	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.40)	IS	IS	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	IS	ND(5)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(0.20)	ND(0.20)	ND(0.20)	IS	IS	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14
CMT_Port_Level:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Sample Date:	11/18/2014	01/08/2015	05/21/2015	07/28/2015	10/26/2015	01/14/2016	3/1/2016	05/04/2016	08/03/2016	11/11/2016	02/22/2017	05/16/2017	08/21/2017	11/13/2017	03/22/2018	06/14/2018	10/04/2018	05/15/2019	08/07/2019		
Parameters	Units	MECP Table 2	ODWQS																		
Tetrachloroethene	ug/L	1.6	10	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(10)	ND(10)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	NS	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	ND(10)	ND(10)	ND(10)	ND(10)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	NS	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Acetone	ug/L	2700	n/a	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	NS	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	ND(10)	ND(10)	ND(10)	ND(10)
Benzene	ug/L	5	1	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.10)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	25	n/a	ND(1.0)	ND(1.0)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.20)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	0.37	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(1)	ND(1)	ND(1)	ND(1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.10)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.20)	ND(0.20)	ND(0.30)	ND(0.20)	NS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.28)	ND(0.28)	ND(0.50)	ND(0.28)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(2)	ND(2)	ND(2)	ND(2)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	2.4	140	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Hexane	ug/L	51	n/a	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Methylene chloride	ug/L	50	50	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(2.0)	ND(0.50)	NS	ND(2.0)	ND(2.0)	ND(2.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
o-Xylene	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.10)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	NS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)
Trichloroethene	ug/L	1.6	5	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Xylenes (total)	ug/L	300	90	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established
 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
 10) OWP - 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.

Table 4C
Summary of Groundwater Analytical Results - Layer 3
N-00596 Former Millbrook Correctional Centre
706 County Road 21
Millbrook, Ontario
Infrastructure Ontario

Sample Location:	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14	MW2-14
CMT_Port_Level:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Sample Date:	10/28/2019	04/16/2020 Duplicate	04/16/2020	08/10/2020	10/22/2020	01/19/2021 Duplicate	01/19/2021	05/04/2021	08/03/2021	11/02/2021	11/02/2021 Duplicate	02/08/2022	02/08/2022 Duplicate	05/19/2022	08/22/2022	12/06/2022				
Parameters	Units	MECP Table 2	ODWQS																	
Tetrachloroethene	ug/L	1.6	10	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30) OWP	ND(30) OWP	ND(30) OWP	ND(30)	ND(30)	ND(20)	ND(20)	ND(20)
Benzene	ug/L	5	1	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	25	n/a	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0) OWP	ND(1.0) OWP	ND(1.0) OWP	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)
Ethylbenzene	ug/L	2.4	140	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Hexane	ug/L	51	n/a	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.20)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40) OWP	ND(0.40) OWP	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)
Methylene chloride	ug/L	50	50	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)
o-Xylene	ug/L	n/a	n/a	ND(0.20)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

Footnotes:
1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
3) ODWQS - Ontario Drinking Water Quality Standards
4) ND(0.50) - Parameter not detected at value stated in parenthesis
5) ND - Not detected at the associated reporting limit
6) IS - Insufficient Sample
7) NS - Not Sampled
8) - indicates no value established
9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
10) OWP - 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.

Table 4C
Summary of Groundwater Analytical Results - Layer 3
N-00596 Former Millbrook Correctional Centre
706 County Road 21
Millbrook, Ontario
Infrastructure Ontario

Sample Location:	MW2-14	MW2-14	MW3-14																
CMT_Port_Level:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Sample Date:	03/02/2023	03/02/2023 Duplicate	11/18/2014	01/08/2015	05/21/2015	07/16/2015	10/26/2015	01/14/2016	3/1/2016	05/04/2016	08/03/2016	11/10/2016	02/22/2017	05/16/2017	08/21/2017	11/13/2017			
Parameters	Units	MECP Table 2	ODWQS																
Tetrachloroethene	ug/L	1.6	10	ND(0.50)	ND(0.50)	5.6	5	5	4.9	4.1	3.4	NS	4.5	3.9	3.8	1.1	2.6	2.6	3.1
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.40)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.40)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.40)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.40)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)						
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.40)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.40)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.40)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.40)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20)	ND(10)	ND(10)	ND(5.0)	ND(5.0)	ND(10)	ND(10)	NS	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	NS	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	ND(20)	ND(20)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	NS	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)
Benzene	ug/L	5	1	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)
Bromoform	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(1.0)	ND(1.0)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.40)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(1.0)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)						
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)
Chlorobenzene	ug/L	30	80	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.50)	ND(0.50)	0.46	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(1)	ND(1)	ND(1)	ND(1)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.20)	ND(0.20)	ND(0.30)	ND(0.40)	NS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.28)	ND(0.28)	ND(0.50)	ND(0.57)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.40)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(0.50)	ND(0.50)	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(1.0)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(2)	ND(2)	ND(2)	ND(2)
Ethylbenzene	ug/L	2.4	140	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Hexane	ug/L	51	n/a	ND(0.50)	ND(0.50)	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(1.0)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.40)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)
Methylene chloride	ug/L	50	50	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(2.0)	ND(1.0)	NS	ND(2.0)	ND(2.0)	ND(2.0)	ND(5)	ND(5)	ND(5)	ND(5)
o-Xylene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.40)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Toluene	ug/L	24	60	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.40)	ND(0.40)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.40)	NS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Trichloroethene	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	2.60	2.59	1.8	1.5	1.9	1.8	1.2	1.1	NS	1.5	1.2	1.2	ND(5)	ND(5)	ND(5)	ND(5)
Vinyl chloride	ug/L	0.5	1	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)

Footnotes:
1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
3) ODWQS - Ontario Drinking Water Quality Standards
4) ND(0.50) - Parameter not detected at value stated in parenthesis
5) ND - Not detected at the associated reporting limit
6) IS - Insufficient Sample
7) NS - Not Sampled
8) - indicates no value established
9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
10) OWP - 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.

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14										
CMT_Port_Level:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
Sample Date:	03/21/2018	03/21/2018 Duplicate	06/12/2018	10/03/2018 Duplicate	10/03/2018	05/10/2019 Duplicate	05/10/2019	08/08/2019 Duplicate	08/08/2019	10/28/2019 Duplicate	10/28/2019	04/16/2020	04/17/2020 Duplicate	08/10/2020	10/22/2020	01/19/2021 Duplicate			
Parameters	Units	MECP Table 2	ODWQS																
Tetrachloroethene	ug/L	1.6	10	2.9	2.7	3.1	2.5	2.6	2.8	2.8	2.5	2.6	2.6	2.5	2.65	2.5	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)
Benzene	ug/L	5	1	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Bromoform	ug/L	25	n/a	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Ethylbenzene	ug/L	2.4	140	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Hexane	ug/L	51	n/a	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	0.24	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Methylene chloride	ug/L	50	50	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
o-Xylene	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.20)	ND(0.20)	0.23	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	0.54	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	0.94	0.9	1.1	0.89	0.93	1.2	1.2	1.2	1.2	1.4	1.3	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Vinyl chloride	ug/L	0.5	1	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(0.20)	ND(0.20)	0.24	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established
 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
 10) OWP - 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.

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:				MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW3-14	MW4-15	MW4-15	MW4-15	MW4-15					
CMT_Port_Level:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	4					
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3					
Sample Date:	01/19/2021	05/04/2021	08/03/2021	11/02/2021	11/02/2021	02/08/2022	02/08/2022	05/19/2022	08/22/2022	12/06/2022	12/06/2022	03/02/2023	07/16/2015	10/26/2015	01/01/2016	03/21/2016														
Parameters	Units	MECP Table 2	ODWQS																											
Tetrachloroethene	ug/L	1.6	10	0.68 OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	2.91 OWP	2.17	2.47	2.24	ND(0.50)	ND(5.0)	ND(0.20)	NS	ND(0.10)											
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(10)	ND(0.50)	NS	NS	ND(0.20)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.20)	NS	NS	ND(0.10)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(10)	ND(0.50)	NS	NS	ND(0.20)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(10)	ND(0.50)	NS	NS	ND(0.20)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.20)	NS	NS	ND(0.10)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.20)	NS	NS	ND(0.10)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(10)	ND(0.20)	NS	NS	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(10)	ND(0.50)	NS	NS	ND(0.20)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(10)	ND(0.50)	NS	NS	ND(0.20)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.20)	NS	NS	ND(0.10)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(10)	ND(0.50)	NS	NS	ND(0.20)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(10)	ND(0.50)	NS	NS	ND(0.20)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20) OWP	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(250)	ND(10)	NS	NS	ND(5.0)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20) OWP	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(250)	ND(5.0)	NS	NS	ND(5.0)
Acetone	ug/L	2700	n/a	ND(30) OWP	ND(30)	ND(30) OWP	ND(30)	ND(30) OWP	ND(30) OWP	ND(30)	ND(30) OWP	ND(30)	ND(30) OWP	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(500)	ND(10)	NS	NS	ND(10)
Benzene	ug/L	5	1	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.20)	NS	NS	ND(0.10)
Bromodichloromethane	ug/L	16	n/a	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5.0)	ND(0.50)	NS	NS	0.11
Bromoform	ug/L	25	n/a	ND(5.0) OWP	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(1.0)	NS	NS	ND(0.20)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(25)	ND(0.50)	NS	NS	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(5.0)	ND(0.20)	NS	NS	ND(0.10)
Chlorobenzene	ug/L	30	80	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.20)	NS	NS	ND(0.10)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0) OWP	ND(1.0)	ND(1.0) OWP	ND(1.0)	ND(1.0) OWP	ND(1.0) OWP	ND(1.0)	ND(1.0) OWP	ND(1.0)	ND(1.0) OWP	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(0.20)	NS	NS	0.24
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	NS	ND(0.10)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(10)	ND(0.30)	NS	NS	ND(0.20)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(14)	ND(0.50)	NS	NS	ND(0.28)	
Dibromochloromethane	ug/L	25	n/a	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(10)	ND(0.50)	NS	NS	ND(0.20)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(25)	ND(1.0)	NS	NS	ND(0.50)
Ethylbenzene	ug/L	2.4	140	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.20)	NS	NS	ND(0.10)
Hexane	ug/L	51	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(25)	ND(1.0)	NS	NS	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40) OWP	ND(0.40)	ND(0.40) OWP	ND(0.40)	ND(0.40) OWP	ND(0.40) OWP	ND(0.40)	ND(0.40) OWP	ND(0.40)																		

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	
CMT_Port_Level:	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Sample Date:	05/03/2016	08/03/2016	11/11/2016	02/23/2017	05/24/2017	08/23/2017	11/13/2017	12/01/2017	03/21/2018	06/12/2018	10/03/2018	05/10/2019	08/08/2019	10/28/2019	05/08/2020	08/12/2020	10/22/2020	01/19/2021			
Parameters	Units	MECP Table 2	ODWQS																		
Tetrachloroethene	ug/L	1.6	10	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,1-Dichloroethane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)						
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,2-Dichloropropane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	NS	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	NS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	NS	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)
Benzene	ug/L	5	1	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Bromoform	ug/L	25	n/a	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)						
Chlorobenzene	ug/L	30	80	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(1)	ND(1)	ND(1)	ND(1)	NS	0.22	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)						
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	--						
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(1.0)	ND(1.0)	ND(1.0)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Ethylbenzene	ug/L	2.4	140	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Hexane	ug/L	51	n/a	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Methylene chloride	ug/L	50	50	ND(2.0)	ND(2.0)	ND(2.0)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
o-Xylene	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	2.5	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
Toluene	ug/L	24	60	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)						
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Vinyl chloride	ug/L	0.5	1	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	--

Footnotes:

- 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
- 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
- 3) ODWQS - Ontario Drinking Water Quality Standards
- 4) ND(0.50) - Parameter not detected at value stated in parenthesis
- 5) ND - Not detected at the associated reporting limit
- 6) IS - Insufficient Sample
- 7) NS - Not Sampled
- 8) - indicates no value established
- 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
- 10) OWP - 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.

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	
CMT_Port_Level:	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Sample Date:	06/01/2021	08/04/2021	11/03/2021	02/09/2022	05/19/2022	08/23/2022	12/06/2022	03/01/2023	07/28/2015	10/26/2015	01/01/2016	03/21/2016	05/03/2016	08/03/2016	11/09/2016	02/23/2017			
Parameters	Units	MECP Table 2	ODWQS																
Tetrachloroethene	ug/L	1.6	10	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(130)	ND(10)	NS	ND(5.0)	ND(10)	ND(10)	ND(10)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(130)	ND(5.0)	NS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)
Acetone	ug/L	2700	n/a	ND(30)	ND(30)	ND(30) OWP	ND(30) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(250)	ND(10)	NS	ND(10)	ND(10)	ND(10)	ND(10)	ND(30)
Benzene	ug/L	5	1	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
Bromodichloromethane	ug/L	16	n/a	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.50)	NS	ND(0.10)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)
Bromoform	ug/L	25	n/a	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(1.0)	NS	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(13)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)
Chlorobenzene	ug/L	30	80	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0)	ND(1.0)	ND(1.0) OWP	ND(1.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	2.8	ND(0.20)	NS	ND(0.10)	ND(0.20)	0.58	ND(0.20)	ND(1)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.50)	NS	ND(0.10)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(5.0)	ND(0.30)	NS	ND(0.20)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(7.1)	ND(0.50)	NS	ND(0.28)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
Dibromochloromethane	ug/L	25	n/a	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(13)	ND(1.0)	NS	ND(0.50)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2)
Ethylbenzene	ug/L	2.4	140	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
Hexane	ug/L	51	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(13)	ND(1.0)	NS	ND(0.50)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.40) OWP	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(2.5)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)
Methylene chloride	ug/L	50	50	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(13)	ND(2.0)	NS	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5)
o-Xylene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
Toluene	ug/L	24	60	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.50)	NS	ND(0.10)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(5.0)	ND(0.40)	NS	ND(0.20)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.5)
Trichloroethene	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.50)	NS	ND(0.10)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5)
Vinyl chloride	ug/L	0.5	1	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.5)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.1)

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established
 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
 10) OWP - 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.

Table 4C
Summary of Groundwater Analytical Results - Layer 3
N-00596 Former Millbrook Correctional Centre
706 County Road 21
Millbrook, Ontario
Infrastructure Ontario

Sample Location:	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	
CMT_Port_Level:	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Sample Date:	05/24/2017	08/23/2017	11/13/2017	12/01/2017	03/21/2018	06/12/2018	10/03/2018	05/10/2019	08/08/2019	10/28/2019	04/27/2020	05/08/2020	08/12/2020	10/22/2020	01/19/2021	08/04/2021			
Parameters	Units	MECP Table 2	ODWQS																
Tetrachloroethene	ug/L	1.6	10	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)								
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)								
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)								
1,1-Dichloroethane	ug/L	5	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.2)	ND(0.2)	ND(0.2)	NS	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)								
1,2-Dichlorobenzene	ug/L	3	200	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)								
1,2-Dichloroethane	ug/L	1.6	5	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)								
1,2-Dichloropropane	ug/L	5	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)								
1,4-Dichlorobenzene	ug/L	1	5	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)								
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20)	ND(20)	NS	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20) / ND(20)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20)	ND(20)	NS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20) / ND(20)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	ND(30)	ND(30)	ND(30)	NS	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30) / ND(30)	ND(30)	ND(30)
Benzene	ug/L	5	1	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0)	ND(2.0)
Bromoform	ug/L	25	n/a	ND(5)	ND(5)	ND(5)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0)	ND(5.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)								
Carbon tetrachloride	ug/L	0.79	2	ND(0.2)	ND(0.2)	ND(0.2)	NS	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)								
Chlorobenzene	ug/L	30	80	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1)	ND(1)	ND(1)	NS	0.2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)								
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30)	ND(0.30)								
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	--	ND(0.50)
Dibromochloromethane	ug/L	25	n/a	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0)	ND(2.0)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2)	ND(2)	ND(2)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0)	ND(2.0)
Ethylbenzene	ug/L	2.4	140	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
Hexane	ug/L	51	n/a	ND(5)	ND(5)	ND(5)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(1.0)	ND(1.0)	ND(1.0)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40) / ND(0.40)	ND(0.40)	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0)	ND(2.0)
Methylene chloride	ug/L	50	50	ND(5)	ND(5)	ND(5)	NS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0)	ND(5.0)
o-Xylene	ug/L	n/a	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30)	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)								
Toluene	ug/L	24	60	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)								
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30)	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5)	ND(5)	ND(5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0)	ND(5.0)
Vinyl chloride	ug/L	0.5	1	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(1.1)	ND(1.1)	ND(1.1)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	--	ND(0.50)

Footnotes:
1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
3) ODWQS - Ontario Drinking Water Quality Standards
4) ND(0.50) - Parameter not detected at value stated in parenthesis
5) ND - Not detected at the associated reporting limit
6) IS - Insufficient Sample
7) NS - Not Sampled
8) - indicates no value established
9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
10) OWP - 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.

Table 4C
Summary of Groundwater Analytical Results - Layer 3
N-00596 Former Millbrook Correctional Centre
706 County Road 21
Millbrook, Ontario
Infrastructure Ontario

Sample Location:	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	
CMT_Port_Level:	6	6	5	6	5	5	6	5	6	5	6	5	6	5	6	
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Sample Date:	08/04/2021	11/03/2021	11/03/2021	02/09/2022	02/09/2022	05/19/2022	05/19/2022	08/23/2022	08/23/2022	08/23/2022	12/06/2022	12/06/2022	03/01/2023	03/01/2023	03/01/2023	
Parameters	Units	MECP Table 2	ODWQS													
Tetrachloroethene	ug/L	1.6	10	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)									
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20) OWP	ND(20)	ND(20)									
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20) OWP	ND(20)	ND(20)									
Acetone	ug/L	2700	n/a	ND(30)	ND(30) OWP	ND(30)	ND(30)	ND(30)	ND(20)	ND(20)						
Benzene	ug/L	5	1	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
Bromodichloromethane	ug/L	16	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)						
Bromoform	ug/L	25	n/a	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(5.0)	ND(0.50)	ND(0.50)						
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)									
Chlorobenzene	ug/L	30	80	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0)	ND(1.0) OWP	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)						
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)									
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)						
Dibromochloromethane	ug/L	25	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)						
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)						
Ethylbenzene	ug/L	2.4	140	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
Hexane	ug/L	51	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)	ND(0.40) OWP	ND(0.40)	ND(0.40)									
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)						
Methylene chloride	ug/L	50	50	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)						
o-Xylene	ug/L	n/a	n/a	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)									
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
Toluene	ug/L	24	60	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)									
Trichloroethene	ug/L	1.6	5	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(5.0)	ND(0.50)	ND(0.50)						
Vinyl chloride	ug/L	0.5	1	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)									
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established
 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
 10) OWP - 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.

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	MW4-15	
CMT_Port_Level:	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Sample Date:	07/28/2015	10/26/2015	01/01/2016	03/21/2016	05/03/2016	08/03/2016	11/09/2016	02/23/2017	05/24/2017	08/23/2017	11/13/2017	12/01/2017	03/21/2018	06/12/2018	10/03/2018	05/10/2019	08/08/2019	10/28/2019	05/08/2020				
Parameters	Units	MECP Table 2	ODWQS																				
Tetrachloroethene	ug/L	1.6	10	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.40)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.40)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.40)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.40)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.40)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.40)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.40)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.40)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(10)	ND(10)	NS	ND(5.0)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	NS	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(10)	ND(5.0)	NS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	NS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)
Acetone	ug/L	2700	n/a	ND(20)	ND(10)	NS	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	NS	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(30)
Benzene	ug/L	5	1	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	1.3	ND(0.50)	NS	ND(0.10)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)
Bromoform	ug/L	25	n/a	ND(0.40)	ND(1.0)	NS	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(1.0)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	2.4	ND(0.20)	NS	ND(0.10)	ND(0.20)	0.26	0.5	ND(1)	ND(1)	ND(1)	ND(1)	NS	0.3	0.22	0.24	0.24	0.24	0.24	0.24	ND(1.0)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.20)	ND(0.50)	NS	ND(0.10)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40)	ND(0.30)	NS	ND(0.20)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.57)	ND(0.50)	NS	ND(0.28)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Dibromochloromethane	ug/L	25	n/a	1.2	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(1.0)	ND(1.0)	NS	ND(0.50)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)
Ethylbenzene	ug/L	2.4	140	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
Hexane	ug/L	51	n/a	ND(1.0)	ND(1.0)	NS	ND(0.50)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.40)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)
Methylene chloride	ug/L	50	50	ND(1.0)	ND(2.0)	NS	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5.0)
o-Xylene	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.40)	ND(0.50)	NS	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	1	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.40)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.20)	ND(0.50)	NS	ND(0.10)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	NS	ND(0.20)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.40)	ND(0.50)	NS	ND(0.10)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)
Vinyl chloride	ug/L	0.5	1	ND(0.40)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(0.20)	ND(0.20)	NS	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)	NS	ND(0.20)	ND(0.20)	ND(0.20)</				

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:				MW4-15	MW4-15	MW4-15	MW5-15	MW5-15																
CMT_Port_Level:				7	7	7	7	7	7	7	7	7	7	7	7	4	4	4	4	4	4	4	4	4
Layer:				3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Sample Date:				08/18/2020	10/22/2020	01/19/2021	08/04/2021	11/03/2021	02/09/2022	05/19/2022	08/23/2022	12/06/2022	03/01/2023			08/25/2015	10/27/2015	01/01/2016	03/21/2016	05/04/2016	08/03/2016	11/14/2016	02/23/2017	
Parameters	Units	MECP Table 2	ODWQS																					
Tetrachloroethene	ug/L	1.6	10	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	2.1	NS	IS	ND(0.20)	ND(0.20)	0.75	ND(0.5)	
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	OWP	ND(0.20)	OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	OWP	ND(20)	OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(10)	ND(10)	NS	IS	ND(10)	ND(10)	ND(10)	ND(20)	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	OWP	ND(20)	OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(5.0)	ND(5.0)	NS	IS	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	
Acetone	ug/L	2700	n/a	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	OWP	ND(30)	OWP	ND(20)	ND(20)	ND(20)	ND(20)	24	ND(10)	NS	IS	76	19	28	ND(30)	
Benzene	ug/L	5	1	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	
Bromodichloromethane	ug/L	16	n/a	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	ND(2.0)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	
Bromoform	ug/L	25	n/a	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	OWP	ND(5.0)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(1.0)	NS	IS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	OWP	ND(0.20)	OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	
Chlorobenzene	ug/L	30	80	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	OWP	ND(1.0)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	2.1	0.65	NS	IS	0.82	ND(0.20)	0.55	ND(1)	
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	OWP	ND(0.30)	OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	NS	IS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
Dibromochloromethane	ug/L	25	n/a	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	ND(2.0)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	ND(2.0)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(1.0)	NS	IS	ND(1.0)	ND(1.0)	ND(1.0)	ND(2)	
Ethylbenzene	ug/L	2.4	140	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	
Hexane	ug/L	51	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(1.0)	NS	IS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	OWP	ND(0.40)	OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	ND(2.0)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	
Methylene chloride	ug/L	50	50	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	OWP	ND(5.0)	OWP	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	NS	IS	ND(2.0)	ND(2.0)	ND(2.0)	ND(5)	
o-Xylene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	OWP	ND(0.30)	OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
Toluene	ug/L	24	60	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	0.48	ND(0.20)	NS	IS	0.2	ND(0.20)	ND(0.20)	ND(0.5)	
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	OWP	ND(0.30)	OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.40)	ND(0.40)	NS	IS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.5)	
Trichloroethene	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	OWP	ND(5.0)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(5)	
Vinyl chloride	ug/L	0.5	1	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	NS	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.1)								

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	
CMT_Port_Level:	4	4	4	4	5&6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Sample Date:	05/19/2022	08/23/2022	12/06/2022	03/01/2023	07/01/2015	08/21/2015	10/27/2015	01/01/2016	03/21/2016	05/04/2016	08/03/2016	11/14/2016	02/23/2017	05/24/2017	08/23/2017	11/16/2017			
Parameters	Units	MECP Table 2	ODWQS																
Tetrachloroethene	ug/L	1.6	10	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)	NS	0.28	0.54	2.3	3.2	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20)	ND(20)	ND(20)	--	23	ND(10)	NS	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20)	ND(20)	ND(20)	--	ND(5.0)	ND(5.0)	NS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	ND(20)	ND(20)	ND(20)	ND(20)	--	200	ND(10)	NS	ND(10)	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)
Benzene	ug/L	5	1	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	2.7	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)
Bromoform	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(1.0)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)
Chlorobenzene	ug/L	30	80	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	5.4	1.4	NS	0.23	1.2	0.86	0.22	ND(1)	ND(1)	ND(1)	ND(1)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	--	ND(0.30)	ND(0.30)	NS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	--	ND(0.50)	ND(0.50)	NS	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	1.5	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(1.0)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2)	ND(2)	ND(2)	ND(2)
Ethylbenzene	ug/L	2.4	140	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Hexane	ug/L	51	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(1.0)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)
Methylene chloride	ug/L	50	50	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	--	ND(2.0)	ND(2.0)	NS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5)	ND(5)	ND(5)	ND(5)
o-Xylene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Toluene	ug/L	24	60	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	0.39	0.24	NS	ND(0.20)	ND(0.20)	0.23	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	--	ND(0.40)	ND(0.40)	NS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Trichloroethene	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)
Vinyl chloride	ug/L	0.5	1	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.20)	ND(0.20)	NS	ND(0.50)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.1)	ND(1.1)	ND(1.1)	ND(1.1)

Footnotes:

- 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
- 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
- 3) ODWQS - Ontario Drinking Water Quality Standards
- 4) ND(0.50) - Parameter not detected at value stated in parenthesis
- 5) ND - Not detected at the associated reporting limit
- 6) IS - Insufficient Sample
- 7) NS - Not Sampled
- 8) - indicates no value established
- 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
- 10) OWP - 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.

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:				MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15
CMT_Port_Level:				5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	5/6	6	5/6	5/6	5/6	5/6
Layer:				3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Sample Date:				12/01/2017	03/22/2018	03/22/2018	06/14/2018	06/14/2018	11/07/2018	05/09/2019	08/07/2019	08/07/2019	10/29/2019	10/29/2019	05/07/2020	05/07/2020	08/12/2020	10/22/2020	01/19/2021
Parameters	Units	MECP Table 2	ODWQS		Duplicate		Duplicate				Duplicate		Duplicate		Duplicate				
Tetrachloroethene	ug/L	1.6	10	0.31/0.60	1.1	0.89	0.85	0.44	ND(0.20)	ND(0.20)	0.69	0.23	ND(0.20)	ND(0.20)	6.12	5.39 / 5.98	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / 0.53
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(10) / ND(10)	ND(20)	ND(20) / ND(20)	ND(20) / ND(20)	ND(20) / ND(20)	ND(20) / ND(20)										
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(5.0) / ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20) / ND(20)	ND(20) / ND(20)	ND(20) / ND(20)	ND(20) / ND(20)
Acetone	ug/L	2700	n/a	ND(10) / ND(10)	ND(30)	ND(30) / ND(30)	ND(30) / ND(30)	ND(30) / ND(30)	ND(30) / ND(30)										
Benzene	ug/L	5	1	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)
Bromoform	ug/L	25	n/a	ND(1.0) / ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	0.61 / 0.55	0.37	0.39	0.37	0.36	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) / ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30) / ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	--
Dibromochloromethane	ug/L	25	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(1.0) / ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)
Ethylbenzene	ug/L	2.4	140	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
Hexane	ug/L	51	n/a	ND(1.0) / ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.20) / ND(0.20)	0.33	0.23	0.2	ND(0.20)	ND(0.20)	ND(0.20)	0.3	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.40) / ND(0.40)	ND(0.40) / ND(0.40)	ND(0.40) / ND(0.40)	ND(0.40) / ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)
Methylene chloride	ug/L	50	50	ND(2.0) / ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)
o-Xylene	ug/L	n/a	n/a	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30) / ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
Toluene	ug/L	24	60	ND(0.20) / ND(0.20)	0.32	0.24	0.24	ND(0.20)	ND(0.20)	ND(0.20)	0.29	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40) / ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30) / ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)
Vinyl chloride	ug/L	0.5	1	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)
Xylenes (total)	ug/L	300	90	ND(0.20) / ND(0.20)	0.33	0.23	0.2	ND(0.20)	ND(0.20)	ND(0.20)	0.3	ND(0.20)	ND(0.20)						

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	
CMT_Port_Level:	5	6	6	5	6	6	5	6	6	5	6	5	6	6	
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Sample Date:	06/01/2021	06/01/2021	06/01/2021	08/04/2021	08/04/2021	08/04/2021	08/04/2021	08/04/2021	08/04/2021	11/03/2021	11/03/2021	02/09/2022	02/09/2022	05/19/2022	05/19/2022
Parameters	Units	MECP Table 2	ODWQS	Duplicate		Duplicate		Duplicate		Duplicate		Duplicate		Duplicate	
Tetrachloroethene	ug/L	1.6	10	0.92 OWP	1.19 OWP	1.47 OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	0.56	1.26
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20) OWP	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20) OWP	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20) OWP	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	ND(30) OWP	ND(30) OWP	ND(30) OWP	ND(30)	ND(30)	ND(30)	ND(30) OWP	ND(30) OWP	ND(30)	ND(30)	ND(20)	ND(20)
Benzene	ug/L	5	1	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)
Bromoform	ug/L	25	n/a	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(0.50)	ND(0.50)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20) OWP	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0) OWP	ND(1.0) OWP	ND(1.0) OWP	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0) OWP	ND(1.0) OWP	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)
Dibromochloromethane	ug/L	25	n/a	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)
Ethylbenzene	ug/L	2.4	140	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Hexane	ug/L	51	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40) OWP	ND(0.40) OWP	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40) OWP	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)
Methylene chloride	ug/L	50	50	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)
o-Xylene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(0.50)	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

Footnotes:

- 1) All values are expressed in units of micrograms per gram (ug/L) unless noted otherwise
- 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
- 3) ODWQS - Ontario Drinking Water Quality Standards
- 4) ND(0.50) - Parameter not detected at value stated in parenthesis
- 5) ND - Not detected at the associated reporting limit
- 6) IS - Insufficient Sample
- 7) NS - Not Sampled
- 8) - indicates no value established
- 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
- 10) OWP - 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.

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:				MW5-15														
CMT_Port_Level:				6	5	6	6	5	6	5	6	5	6	6	7	7	7	
Layer:				3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Sample Date:				05/19/2022	08/23/2022	08/23/2022	08/23/2022	12/06/2022	12/06/2022	03/01/2023	03/01/2023	03/01/2023	03/01/2023	10/22/2020	01/19/2021	05/05/2021	06/01/2021	08/04/2021
Parameters	Units	MECP Table 2	ODWQS	Duplicate			Duplicate						Duplicate					
Tetrachloroethene	ug/L	1.6	10	1.39	ND(0.50)	0.72 OWP	0.56											
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)	ND(0.50) OWP	ND(0.50)												
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20) OWP	ND(0.20)												
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50) OWP	ND(0.50)												
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50) OWP	ND(0.50)												
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50) OWP	ND(0.50)												
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20) OWP	473												
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20) OWP	ND(20)												
Acetone	ug/L	2700	n/a	ND(20)	ND(30)	ND(30)	ND(30)	ND(30) OWP	2,180									
Benzene	ug/L	5	1	ND(0.50)	2.93	ND(0.50) OWP	ND(0.50)											
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
Bromoform	ug/L	25	n/a	ND(0.50)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0)									
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20) OWP	ND(0.20)												
Chlorobenzene	ug/L	30	80	ND(0.50)	ND(0.50) OWP	ND(0.50)												
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.50)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0) OWP	ND(1.0)									
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30) OWP	ND(0.30)												
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.5)	--	ND(0.50)	ND(0.50) OWP	ND(0.50)										
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0)									
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0)									
Ethylbenzene	ug/L	2.4	140	ND(0.50)	1.48	ND(0.50) OWP	ND(0.50)											
Hexane	ug/L	51	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)	6.32	ND(0.40) OWP	ND(0.40)											
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0)									
Methylene chloride	ug/L	50	50	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0)									
o-Xylene	ug/L	n/a	n/a	ND(0.30)	2.71	ND(0.30) OWP	ND(0.30)											
Styrene	ug/L	5.4	n/a	ND(0.50)	1.34	ND(0.50) OWP	ND(0.50)											
Toluene	ug/L	24	60	ND(0.50)	11.8	ND(0.50) OWP	ND(0.50)											
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)												
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30) OWP	ND(0.30)												
Trichloroethene	ug/L	1.6	5	ND(0.50)	ND(0.50) OWP	ND(0.50)												
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0)									
Vinyl chloride	ug/L	0.5	1	ND(0.50)	ND(0.50) OWP	ND(0.50)												
Xylenes (total)	ug/L	300	90	ND(0.50)	--	9.03	ND(0.50)	ND(0.50)										

Footnotes:

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- 6) IS - Insufficient Sample
- 7) NS - Not Sampled
- 8) - indicates no value established
- 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
- 10) OWP - 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.

Table 4C
Summary of Groundwater Analytical Results - Layer 3
N-00596 Former Millbrook Correctional Centre
706 County Road 21
Millbrook, Ontario
Infrastructure Ontario

Sample Location:	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW5-15	MW6-16							
CMT_Port_Level:	7	7	7	7	7	7	7	7	7	7	7	1	1	1	1	1	1	1	1
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Sample Date:	11/03/2021	02/09/2022	05/19/2022	08/23/2022	08/23/2022 Duplicate	12/06/2022	12/06/2022 Duplicate	03/01/2023				01/25/2016	03/01/2016	05/04/2016	08/02/2016	11/10/2016	02/23/2017	03/09/2017	05/16/2017
Parameters	Units	MECP Table 2	ODWQS																
Tetrachloroethene	ug/L	1.6	10	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	3.8	NS	1.5	3.7	2.2	ND(0.5)	NS	1.6
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	NS	ND(0.2)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(10)	NS	ND(10)	ND(10)	ND(10)	ND(20)	NS	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20) OWP	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(5.0)	NS	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	NS	ND(20)
Acetone	ug/L	2700	n/a	ND(30) OWP	ND(30)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(10)	NS	ND(10)	ND(10)	ND(10)	ND(30)	NS	ND(30)
Benzene	ug/L	5	1	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)
Bromodichloromethane	ug/L	16	n/a	ND(2.0) OWP	ND(2.0)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	NS	ND(2)
Bromoform	ug/L	25	n/a	ND(5.0) OWP	ND(5.0)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	NS	ND(5)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20) OWP	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	NS	ND(0.2)
Chlorobenzene	ug/L	30	80	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0) OWP	ND(1.0)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	2.6	NS	0.31	ND(0.20)	ND(0.20)	ND(1)	NS	ND(1)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	NS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	NS	ND(0.5)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.5) OWP	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
Dibromochloromethane	ug/L	25	n/a	ND(2.0) OWP	ND(2.0)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	NS	ND(2)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0) OWP	ND(2.0)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(2)	NS	ND(2)
Ethylbenzene	ug/L	2.4	140	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)
Hexane	ug/L	51	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0)	ND(5)	NS	ND(5)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40) OWP	ND(0.40)	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	0.26	NS	0.24	ND(0.20)	ND(0.20)	ND(1.0)	NS	ND(1.0)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0) OWP	ND(2.0)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(2)	NS	ND(2)
Methylene chloride	ug/L	50	50	ND(5.0) OWP	ND(5.0)	ND(1.0) OWP	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	NS	ND(2.0)	ND(2.0)	ND(2.0)	ND(5)	NS	ND(5)
o-Xylene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)
Styrene	ug/L	5.4	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
Toluene	ug/L	24	60	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	0.47	NS	0.39	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	NS	ND(0.5)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) OWP	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.40)	NS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.5)	NS	ND(0.5)
Trichloroethene	ug/L	1.6	5	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5.0) OWP	ND(5.0)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	0.52	NS	ND(0.50)	0.61	ND(0.50)	ND(5)	NS	ND(5)
Vinyl chloride	ug/L	0.5	1	ND(0.50) OWP	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	0.26	NS	0.24	ND(0.20)	ND(0.20)	ND(1.1)	NS	ND(1.1)

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established
 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
 10) OWP - 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.

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16		
CMT_Port_Level:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
Sample Date:	08/21/2017	11/16/2017	03/20/2018	03/20/2018	06/13/2018	06/13/2018	10/02/2018	10/02/2018	05/08/2019	05/08/2019	08/09/2019	08/09/2019	08/09/2019	10/29/2019	10/29/2019	04/16/2020	08/10/2020	10/22/2020	1/19/2021			
Parameters	Units	MECP Table 2	ODWQS																			
Tetrachloroethene	ug/L	1.6	10	1.5	1.3	2.5	2.6	2.1	2.1	1.5	1.7	1.7	1.7	1.3	1.2	1.6	1.6	1.38	ND(0.50)	ND(0.50)	OWP	IS
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
1,1-Dichloroethane	ug/L	5	n/a	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
1,1-Dichloroethene	ug/L	1.6	14	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	OWP	IS								
1,2-Dichlorobenzene	ug/L	3	200	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
1,2-Dichloroethane	ug/L	1.6	5	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
1,2-Dichloropropane	ug/L	5	n/a	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
1,4-Dichlorobenzene	ug/L	1	5	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20)	ND(10)	ND(10) / ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	OWP	IS								
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20)	ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	OWP	IS								
Acetone	ug/L	2700	n/a	ND(30)	ND(30)	ND(10)	ND(10) / ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	31	IS									
Benzene	ug/L	5	1	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
Bromodichloromethane	ug/L	16	n/a	ND(2)	ND(2)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	IS								
Bromoform	ug/L	25	n/a	ND(5)	ND(5)	ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	OWP	IS								
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
Carbon tetrachloride	ug/L	0.79	2	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	OWP	IS								
Chlorobenzene	ug/L	30	80	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1)	ND(1)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	4.2 OWP	IS									
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	OWP	IS								
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
Dibromochloromethane	ug/L	25	n/a	ND(2)	ND(2)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	IS								
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2)	ND(2)	ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	IS								
Ethylbenzene	ug/L	2.4	140	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
Hexane	ug/L	51	n/a	ND(5)	ND(5)	ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
m&p-Xylenes	ug/L	n/a	n/a	ND(1.0)	ND(1.0)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.40)	ND(0.40)	OWP	IS								
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2)	ND(2)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	IS								
Methylene chloride	ug/L	50	50	ND(5)	ND(5)	ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0)	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	OWP	IS								
o-Xylene	ug/L	n/a	n/a	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.30)	ND(0.30)	ND(0.30)	OWP	IS								
Styrene	ug/L	5.4	n/a	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
Toluene	ug/L	24	60	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.5)	ND(0.5)	ND(0.40)	ND(0.40) / ND(0.40)	ND(0.40)	ND(0.40)	ND(0.30)	ND(0.30)	ND(0.30)	OWP	IS								
Trichloroethene	ug/L	1.6	5	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5)	ND(5)	0.52	0.54	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(5.0)	ND(5.0)	OWP	IS						
Vinyl chloride	ug/L	0.5	1	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								
Xylenes (total)	ug/L	300	90	ND(1.1)	ND(1.1)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	IS								

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16		
CMT_Port_Level:	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
Sample Date:	11/02/2021	01/01/2016	01/14/2016	03/01/2016	05/01/2016	05/04/2016	08/01/2016	08/02/2016	11/01/2016	11/10/2016	02/23/2017	03/09/2017	05/16/2017	08/21/2017	11/16/2017	03/20/2018	06/13/2018	06/13/2018	10/02/2018			
Parameters	Units	MECP Table 2	ODWQS																			
Tetrachloroethene	ug/L	1.6	10	ND(0.50) OWP	ND(0.10)	ND(0.10)	NS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50) OWP	--	ND(0.20)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50) OWP	--	ND(0.10)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50) OWP	--	ND(0.20)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50) OWP	--	ND(0.20)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50) OWP	--	ND(0.10)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50) OWP	--	ND(0.10)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20) OWP	--	ND(0.20)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.2)	NS	ND(0.2)	ND(0.2)	ND(0.2) / ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50) OWP	--	ND(0.20)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50) OWP	--	ND(0.20)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50) OWP	--	ND(0.10)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50) OWP	--	ND(0.20)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50) OWP	--	ND(0.20)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20) OWP	--	ND(5.0)	NS	--	ND(10)	--	ND(10)	--	ND(10)	ND(20)	NS	ND(20)	ND(20)	ND(20) / ND(20)	ND(10)	ND(10)	ND(10)	ND(10)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20) OWP	--	ND(5.0)	NS	--	ND(5.0)	--	ND(5.0)	--	ND(5.0)	ND(20)	NS	ND(20)	ND(20)	ND(20) / ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Acetone	ug/L	2700	n/a	ND(30) OWP	--	ND(10)	NS	--	ND(10)	--	ND(10)	--	ND(10)	ND(30)	NS	ND(30)	ND(30)	ND(30) / ND(30)	ND(10)	ND(10)	ND(10)	ND(10)
Benzene	ug/L	5	1	ND(0.50) OWP	--	ND(0.10)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Bromodichloromethane	ug/L	16	n/a	ND(2.0) OWP	--	ND(0.10)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(2)	NS	ND(2)	ND(2)	ND(2) / ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	25	n/a	ND(5.0) OWP	--	ND(0.20)	NS	--	ND(1.0)	--	ND(1.0)	--	ND(1.0)	ND(5)	NS	ND(5)	ND(5)	ND(5) / ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50) OWP	--	ND(0.50)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20) OWP	--	ND(0.10)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.2)	NS	ND(0.2)	ND(0.2)	ND(0.2) / ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.50) OWP	--	ND(0.10)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0) OWP	--	0.73	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(1)	NS	ND(1)	ND(1)	ND(1) / ND(1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) OWP	--	ND(0.10)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) OWP	--	ND(0.20)	NS	--	ND(0.30)	--	ND(0.30)	--	ND(0.30)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	--	ND(0.28)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Dibromochloromethane	ug/L	25	n/a	ND(2.0) OWP	--	ND(0.20)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(2)	NS	ND(2)	ND(2)	ND(2) / ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0) OWP	--	ND(0.50)	NS	--	ND(1.0)	--	ND(1.0)	--	ND(1.0)	ND(2)	NS	ND(2)	ND(2)	ND(2) / ND(2)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Ethylbenzene	ug/L	2.4	140	ND(0.50) OWP	--	ND(0.10)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Hexane	ug/L	51	n/a	ND(0.50) OWP	--	ND(0.50)	NS	--	ND(1.0)	--	ND(1.0)	--	ND(1.0)	ND(5)	NS	ND(5)	ND(5)	ND(5) / ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40) OWP	--	0.31	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0) / ND(1.0)	0.29	0.33	0.32	0.32
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0) OWP	--	ND(0.20)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(2)	NS	ND(2)	ND(2)	ND(2) / ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Methylene chloride	ug/L	50	50	ND(5.0) OWP	--	ND(0.50)	NS	--	ND(2.0)	--	ND(2.0)	--	ND(2.0)	ND(5)	NS	ND(5)	ND(5)	ND(5) / ND(5)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
o-Xylene	ug/L	n/a	n/a	ND(0.30) OWP	--	ND(0.10)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Styrene	ug/L	5.4	n/a	ND(0.50) OWP	--	ND(0.20)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.50) OWP	--	0.38	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	0.27	0.33	0.31	0.31
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50) OWP	--	ND(0.10)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30) OWP	--	ND(0.20)	NS	--	ND(0.40)	--	ND(0.40)	--	ND(0.40)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)
Trichloroethene	ug/L	1.6	5	ND(0.50) OWP	--	ND(0.10)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5.0) OWP	--	ND(0.20)	NS	--	ND(0.50)	--	ND(0.50)	--	ND(0.50)	ND(5)	NS	ND(5)	ND(5)	ND(5) / ND(5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(0.50) OWP	--	ND(0.20)	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(0.5)	NS	ND(0.5)	ND(0.5)	ND(0.5) / ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Xylenes (total)	ug/L	300	90	ND(0.50)	--	0.31	NS	--	ND(0.20)	--	ND(0.20)	--	ND(0.20)	ND(1.1)	NS	ND(1.1)	ND(1.1)	ND(1.1) / ND(1.1)	0.29	0.33	0.32	0.32

Footnotes:

- 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
- 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
- 3) ODWQS - Ontario Drinking Water Quality Standards
- 4) ND(0.50) - Parameter not detected at value stated in parenthesis
- 5) ND - Not detected at the associated reporting limit
- 6) IS - Insufficient Sample
- 7) NS - Not Sampled
- 8) - indicates no value established
- 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
- 10) OWP - 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.

Table 4C
Summary of Groundwater Analytical Results - Layer 3
N-00596 Former Millbrook Correctional Centre
706 County Road 21
Millbrook, Ontario
Infrastructure Ontario

Sample Location: CMT_Port_Level: Layer: Sample Date:			MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16		
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
	05/08/2019	08/09/2019	10/29/2019	4/16/2020	08/10/2020	10/22/2020	10/22/2020	01/19/2021	05/04/2021	08/03/2021	02/08/2022	Duplicate												
Parameters	Units	MECP Table 2	ODWQS																					
Tetrachloroethene	ug/L	1.6	10	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	OWP	ND(0.20)	OWP	ND(0.20)	OWP	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.2)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(10)	ND(10)	ND(10)	IS	ND(20)	ND(20)	ND(20)	ND(20)	OWP	ND(20)	OWP	ND(20)	OWP	ND(20)	ND(10)	NS	ND(10)	ND(10)	ND(10)	NS	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(5.0)	ND(5.0)	ND(5.0)	IS	ND(20)	ND(20)	ND(20)	ND(20)	OWP	ND(20)	OWP	ND(20)	OWP	ND(20)	ND(5.0)	NS	ND(5.0)	ND(5.0)	ND(5.0)	NS	ND(20)
Acetone	ug/L	2700	n/a	ND(10)	ND(10)	ND(10)	IS	ND(30)	ND(30)	ND(30)	ND(30)	OWP	ND(30)	OWP	ND(30)	OWP	ND(30)	ND(10)	NS	ND(10)	ND(10)	ND(10)	NS	ND(30)
Benzene	ug/L	5	1	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	ND(2.0)	OWP	ND(2.0)	OWP	ND(2.0)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(2)
Bromoform	ug/L	25	n/a	ND(1.0)	ND(1.0)	ND(1.0)	IS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	OWP	ND(5.0)	OWP	ND(5.0)	OWP	ND(5.0)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0)	NS	ND(5)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	OWP	ND(0.20)	OWP	ND(0.20)	OWP	ND(0.20)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.2)
Chlorobenzene	ug/L	30	80	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(1.0)	3.3	ND(1.0)	ND(1.0)	OWP	ND(1.0)	OWP	ND(1.0)	OWP	ND(1.0)	0.29	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(1)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	IS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	OWP	ND(0.30)	OWP	ND(0.30)	OWP	ND(0.30)	ND(0.30)	NS	ND(0.30)	ND(0.30)	ND(0.30)	NS	ND(0.5)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
Dibromochloromethane	ug/L	25	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	ND(2.0)	OWP	ND(2.0)	OWP	ND(2.0)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(2)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(1.0)	ND(1.0)	ND(1.0)	IS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	ND(2.0)	OWP	ND(2.0)	OWP	ND(2.0)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0)	NS	ND(2)
Ethylbenzene	ug/L	2.4	140	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
Hexane	ug/L	51	n/a	ND(1.0)	ND(1.0)	ND(1.0)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(1.0)	NS	ND(1.0)	ND(1.0)	ND(1.0)	NS	ND(5)
m&p-Xylenes	ug/L	n/a	n/a	0.42	0.35	0.32	IS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	OWP	ND(0.40)	OWP	ND(0.40)	OWP	ND(0.40)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(1.0)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	OWP	ND(2.0)	OWP	ND(2.0)	OWP	ND(2.0)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(2)
Methylene chloride	ug/L	50	n/a	ND(2.0)	ND(2.0)	ND(2.0)	IS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	OWP	ND(5.0)	OWP	ND(5.0)	OWP	ND(5.0)	ND(2.0)	NS	ND(2.0)	ND(2.0)	ND(2.0)	NS	ND(5)
o-Xylene	ug/L	n/a	n/a	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	OWP	ND(0.30)	OWP	ND(0.30)	OWP	ND(0.30)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
Toluene	ug/L	24	60	0.39	0.32	0.29	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(0.5)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.40)	IS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	OWP	ND(0.30)	OWP	ND(0.30)	OWP	ND(0.30)	ND(0.40)	NS	ND(0.40)	ND(0.40)	ND(0.40)	NS	ND(0.5)
Trichloroethene	ug/L	1.6	5	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)	ND(0.50)	ND(0.50)	IS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	OWP	ND(5.0)	OWP	ND(5.0)	OWP	ND(5.0)	ND(0.50)	NS	ND(0.50)	ND(0.50)	ND(0.50)	NS	ND(5)
Vinyl chloride	ug/L	0.5	1	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	OWP	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(0.5)
Xylenes (total)	ug/L	300	90	0.42	0.35	0.32 /0.32	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.20)	NS	ND(0.20)	ND(0.20)	ND(0.20)	NS	ND(1.1)	

Footnotes:
1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
3) ODWQS - Ontario Drinking Water Quality Standards
4) ND(0.50) - Parameter not detected at value stated in parenthesis
5) ND - Not detected at the associated reporting limit
6) IS - Insufficient Sample
7) NS - Not Sampled
8)

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	
CMT_Port_Level:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Sample Date:	05/16/2017	08/21/2017	11/16/2017	03/20/2018	06/13/2018	10/02/2018	05/09/2019	08/09/2019	10/29/2019	4/16/2020	08/10/2020	10/22/2020	10/22/2020	01/19/2021	05/04/2021			
Parameters	Units	MECP Table 2	ODWQS															
Tetrachloroethene	ug/L	1.6	10	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20)	ND(20)	ND(10)	ND(10)	ND(10)	ND(10) / ND(10)	ND(10) / ND(10)	ND(10) / ND(10)	IS	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20)	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)	ND(5.0) / ND(5.0)	IS	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	ND(30)	ND(30)	ND(30)	ND(10)	ND(10)	ND(10)	ND(10) / ND(10)	ND(10) / ND(10)	ND(10) / ND(10)	IS	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)
Benzene	ug/L	5	1	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Bromoform	ug/L	25	n/a	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	IS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1)	ND(1)	ND(1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30) / ND(0.30)	ND(0.30) / ND(0.30)	IS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)
Dibromochloromethane	ug/L	25	n/a	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2)	ND(2)	ND(2)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	IS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Ethylbenzene	ug/L	2.4	140	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Hexane	ug/L	51	n/a	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	ND(1.0) / ND(1.0)	IS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
m&p-Xylenes	ug/L	n/a	n/a	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)
Methylene chloride	ug/L	50	50	ND(5)	ND(5)	ND(5)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)	ND(2.0) / ND(2.0)	IS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
o-Xylene	ug/L	n/a	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Toluene	ug/L	24	60	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40) / ND(0.40)	ND(0.40) / ND(0.40)	ND(0.40) / ND(0.40)	IS	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5)	ND(5)	ND(5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	ND(0.50) / ND(0.50)	IS	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
Vinyl chloride	ug/L	0.5	1	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(1.1)	ND(1.1)	ND(1.1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	ND(0.20) / ND(0.20)	IS	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)

Footnotes:

- 1) All values are expressed in units of micrograms per gram (ug/L) unless noted otherwise
- 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
- 3) ODWQS - Ontario Drinking Water Quality Standards
- 4) ND(0.50) - Parameter not detected at value stated in parenthesis
- 5) ND - Not detected at the associated reporting limit
- 6) IS - Insufficient Sample
- 7) NS - Not Sampled
- 8) - indicates no value established
- 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
- 10) OWP - 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.

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:		MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW6-16	MW17									
CMT_Port_Level:		3	3	3	3	3	3	3	3	3	3	3	1	1	1	1	1	1	1	1	1	1
Layer:		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Sample Date:		05/04/2021	08/03/2021	08/03/2021	11/02/2021	02/08/2022	05/19/2022	05/19/2022	05/19/2022	05/19/2022	05/19/2022	05/19/2022	03/09/2017	05/16/2017	08/21/2017	11/13/2017	03/21/2018	06/12/2018	10/03/2018	05/10/2019	08/08/2019	10/28/2019
Parameters	Units	MECP Table 2	ODWQS	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate
Tetrachloroethene	ug/L	1.6	10	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20) OWP	ND(20)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)										
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20) OWP	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)										
Acetone	ug/L	2700	n/a	ND(30)	ND(30) OWP	ND(30)	ND(20)	ND(20)	ND(30)	ND(30)	ND(30)	ND(30)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)				
Benzene	ug/L	5	1	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
Bromodichloromethane	ug/L	16	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
Bromoform	ug/L	25	n/a	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(0.50)	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)				
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
Chlorobenzene	ug/L	30	80	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0)	ND(1.0) OWP	ND(1.0)	ND(0.50)	ND(0.50)	ND(1)	ND(1)	ND(1)	ND(1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)				
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
Dibromochloromethane	ug/L	25	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)				
Ethylbenzene	ug/L	2.4	140	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
Hexane	ug/L	51	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)				
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(0.50)	ND(0.50)	ND(2)	ND(2)	ND(2)	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
Methylene chloride	ug/L	50	50	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(1.0)	ND(1.0)	ND(5)	ND(5)	ND(5)	ND(5)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)				
o-Xylene	ug/L	n/a	n/a	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
Toluene	ug/L	24	60	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)				
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)				
Trichloroethene	ug/L	1.6	5	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)				
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(0.50)	ND(0.50)	ND(5)	ND(5)	ND(5)	ND(5)	ND(0.50)									

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:				MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17						
CMT_Port_Level:				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Layer:				3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Sample Date:				04/17/2020	08/10/2020	08/10/2020	10/22/2020	01/19/2021	05/04/2021	08/03/2021	11/02/2021	02/08/2022	02/08/2022	05/19/2022	08/22/2022	12/06/2022	03/02/2023	03/09/2017	05/16/2017	08/21/2017
Parameters	Units	MECP Table 2	ODWQS		Duplicate															
Tetrachloroethene	ug/L	1.6	10	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)						
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20) OWP	ND(20) OWP	ND(20)						
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20) OWP	ND(20) OWP	ND(20) OWP	ND(20) OWP	ND(20)						
Acetone	ug/L	2700	n/a	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30) OWP	ND(30) OWP	ND(30) OWP	ND(30) OWP	ND(20)						
Benzene	ug/L	5	1	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
Bromodichloromethane	ug/L	16	n/a	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)						
Bromoform	ug/L	25	n/a	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(0.50)						
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20) OWP	ND(0.20) OWP	ND(0.20) OWP	ND(0.20) OWP	ND(0.20)						
Chlorobenzene	ug/L	30	80	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1.0)	ND(1.0)	17.9	9	9.3	10.1	3.1 OWP	2.6 OWP	ND(1.0) OWP	ND(1.0) OWP	ND(0.50)	0.94	ND(0.50)	0.85	ND(1)	ND(1)	ND(1)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)						
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)						
Dibromochloromethane	ug/L	25	n/a	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)						
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)						
Ethylbenzene	ug/L	2.4	140	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
Hexane	ug/L	51	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40) OWP	ND(0.40) OWP	ND(0.40) OWP	ND(0.40) OWP	ND(0.40)						
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(2.0) OWP	ND(0.50)						
Methylene chloride	ug/L	50	50	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(1.0)						
o-Xylene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)						
Styrene	ug/L	5.4	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
Toluene	ug/L	24	60	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30) OWP	ND(0.30)						
Trichloroethene	ug/L	1.6	5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(5.0) OWP	ND(0.50)						
Vinyl chloride	ug/L	0.5	1	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50) OWP	ND(0.50)						
Xylenes (total)	ug/L	300	90	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

Footnotes:
 1) All values are expressed in units of micrograms per gram (ug/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established
 9) Bold and highlighted values exceed the MECP Table 2 Standard.
 10) OWP - 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.

Table 4C

Summary of Groundwater Analytical Results - Layer 3
 N-00596 Former Millbrook Correctional Centre
 706 County Road 21
 Millbrook, Ontario
 Infrastructure Ontario

Sample Location:	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	MW17	
CMT_Port_Level:	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Layer:	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Sample Date:	11/13/2017	03/21/2018	06/12/2018	10/03/2018	05/10/2019	08/08/2019	10/28/2019	04/17/2020	08/10/2020	10/22/2020	01/19/2021	05/04/2021	08/03/2021	11/02/2021	02/08/2022	05/19/2022	08/22/2022				
Parameters	Units	MECP Table 2	ODWQS																		
Tetrachloroethene	ug/L	1.6	10	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.5)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)										
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.5)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)										
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.5)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)										
1,1-Dichloroethane	ug/L	5	n/a	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.2)	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)										
1,2-Dichlorobenzene	ug/L	3	200	ND(0.5)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)										
1,2-Dichloroethane	ug/L	1.6	5	ND(0.5)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)										
1,2-Dichloropropane	ug/L	5	n/a	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.5)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)										
1,4-Dichlorobenzene	ug/L	1	5	ND(0.5)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)										
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)	ND(20) OWP	ND(20)	ND(20)	ND(20)	ND(20)	ND(20)
Acetone	ug/L	2700	n/a	ND(30)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30)	ND(30) OWP	ND(30)	ND(30)	ND(20)	ND(20)	ND(20)
Benzene	ug/L	5	1	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)
Bromoform	ug/L	25	n/a	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.5)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)										
Carbon tetrachloride	ug/L	0.79	2	ND(0.2)	ND(0.20)	ND(0.20) OWP	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)										
Chlorobenzene	ug/L	30	80	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(1.0)	3.7	4.6	6	5.8 OWP	4.9	5.5	5.20	0.68	1.61	
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.5)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)										
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.5)	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)										
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.5)	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.5)	ND(0.5)	ND(0.5)							
Dibromochloromethane	ug/L	25	n/a	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(2)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)
Ethylbenzene	ug/L	2.4	140	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Hexane	ug/L	51	n/a	ND(5)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(1.0)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40) OWP	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(2)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) OWP	ND(2.0)	ND(2.0)	ND(0.50)	ND(0.50)	ND(0.50)
Methylene chloride	ug/L	50	50	ND(5)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)
o-Xylene	ug/L	n/a	n/a	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.5)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)										
Toluene	ug/L	24	60	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.5)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)										
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.5)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30) OWP	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0) OWP	ND(5.0)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(0.5)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50) OWP	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(1.1)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.50)	ND(0.50)	ND(0.50)	--	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)

Footnotes:
 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
 3) ODWQS - Ontario Drinking Water Quality Standards
 4) ND(0.50) - Parameter not detected at value stated in parenthesis
 5) ND - Not detected at the associated reporting limit
 6) IS - Insufficient Sample
 7) NS - Not Sampled
 8) - indicates no value established
 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
 10) OWP - 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.

Table 4C

Summary of Groundwater Analytical Results - Layer 3
N-00596 Former Millbrook Correctional Centre
706 County Road 21
Millbrook, Ontario
Infrastructure Ontario

Sample Location: MW17
CMT_Port_Level: 2
Layer: 3
Sample Date: 03/01/2023

Parameters	Units	MECP Table 2	ODWQS	
Tetrachloroethene	ug/L	1.6	10	ND(0.50)
1,1,1,2-Tetrachloroethane	ug/L	1.1	n/a	ND(0.50)
1,1,1-Trichloroethane	ug/L	200	n/a	ND(0.50)
1,1,2,2-Tetrachloroethane	ug/L	1	n/a	ND(0.50)
1,1,2-Trichloroethane	ug/L	4.7	n/a	ND(0.50)
1,1-Dichloroethane	ug/L	5	n/a	ND(0.50)
1,1-Dichloroethene	ug/L	1.6	14	ND(0.50)
1,2-Dibromoethane (Ethylene dibromide)	ug/L	0.2	n/a	ND(0.20)
1,2-Dichlorobenzene	ug/L	3	200	ND(0.50)
1,2-Dichloroethane	ug/L	1.6	5	ND(0.50)
1,2-Dichloropropane	ug/L	5	n/a	ND(0.50)
1,3-Dichlorobenzene	ug/L	59	n/a	ND(0.50)
1,4-Dichlorobenzene	ug/L	1	5	ND(0.50)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	1800	n/a	ND(20)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	640	n/a	ND(20)
Acetone	ug/L	2700	n/a	ND(20)
Benzene	ug/L	5	1	ND(0.50)
Bromodichloromethane	ug/L	16	n/a	ND(0.50)
Bromoform	ug/L	25	n/a	ND(0.50)
Bromomethane (Methyl bromide)	ug/L	0.89	n/a	ND(0.50)
Carbon tetrachloride	ug/L	0.79	2	ND(0.20)
Chlorobenzene	ug/L	30	80	ND(0.50)
Chloroform (Trichloromethane)	ug/L	2.4	n/a	ND(0.50)
cis-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)
cis-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	ug/L	0.5	n/a	ND(0.5)
Dibromochloromethane	ug/L	25	n/a	ND(0.50)
Dichlorodifluoromethane (CFC-12)	ug/L	590	n/a	ND(0.50)
Ethylbenzene	ug/L	2.4	140	ND(0.50)
Hexane	ug/L	51	n/a	ND(0.50)
m&p-Xylenes	ug/L	n/a	n/a	ND(0.40)
Methyl tert butyl ether (MTBE)	ug/L	15	n/a	ND(0.50)
Methylene chloride	ug/L	50	50	ND(1.0)
o-Xylene	ug/L	n/a	n/a	ND(0.30)
Styrene	ug/L	5.4	n/a	ND(0.50)
Toluene	ug/L	24	60	ND(0.50)
trans-1,2-Dichloroethene	ug/L	1.6	n/a	ND(0.50)
trans-1,3-Dichloropropene	ug/L	n/a	n/a	ND(0.30)
Trichloroethene	ug/L	1.6	5	ND(0.50)
Trichlorofluoromethane (CFC-11)	ug/L	150	n/a	ND(0.50)
Vinyl chloride	ug/L	0.5	1	ND(0.50)
Xylenes (total)	ug/L	300	90	ND(0.50)

Footnotes:

- 1) All values are expressed in units of micrograms per gram (µg/L) unless noted otherwise
- 2) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition, All Types of Property Use, for coarse-textured soils (MECP Table 2 Standards)
- 3) ODWQS - Ontario Drinking Water Quality Standards
- 4) ND(0.50) - Parameter not detected at value stated in parenthesis
- 5) ND - Not detected at the associated reporting limit
- 6) IS - Insufficient Sample
- 7) NS - Not Sampled
- 8) - indicates no value established
- 9) **Bold** and highlighted values exceed the MECP Table 2 Standard.
- 10) OWP - 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.

Appendices

Appendix A

Laboratory Certificates of Analysis



CERTIFICATE OF ANALYSIS

Work Order	: WT2204361	Page	: 1 of 28
Client	: GHD Limited	Laboratory	: Waterloo - Environmental
Contact	: Jennifer Balkwill	Account Manager	: Rick Hawthorne
Address	: 455 Phillip Street Waterloo ON Canada N2L 3X2	Address	: 60 Northland Road, Unit 1 Waterloo ON Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 11206432-40	Date Samples Received	: 25-May-2022 13:00
PO	: 735-003054	Date Analysis	: 25-May-2022
		Commenced	
C-O-C number	: ----	Issue Date	: 31-May-2022 13:10
Sampler	: ----		
Site	: ----		
Quote number	: 11206432-SSOW-735-003054		
No. of samples received	: 25		
No. of samples analysed	: 25		

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
- Surrogate Control Limits

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 FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Organics, Waterloo, Ontario
Sarah Birch	Team Leader - Volatiles	Organics, 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.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
 LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
µg/L	micrograms per litre

>: greater than.

<: less than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

<i>Qualifier</i>	<i>Description</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>



Analytical Results

WT2204361-001

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW22-WM

Client sampling date / time: 19-May-2022 11:10

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	88.0	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	108	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-002

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW5-15.5-WM

Client sampling date / time: 19-May-2022 11:10

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	0.56	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	87.6	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	108	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-003

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW5-15-7-WM

Client sampling date / time: 19-May-2022 10:15

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20 OWP.	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20 OWP.	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20 OWP.	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0 OWP.	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50 OWP.	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30 OWP.	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30 OWP.	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20 OWP.	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20 OWP.	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40 OWP.	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30 OWP.	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50 OWP.	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0 OWP.	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	85.7	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-004

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW17-1-WM

Client sampling date / time: 19-May-2022 10:35

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	87.4	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	108	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-005

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW4-15-6-WM

Client sampling date / time: 19-May-2022 13:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	88.6	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-006

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW4-15-7-WM

Client sampling date / time: 19-May-2022 14:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	86.2	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-007

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW4-15-1-WM

Client sampling date / time: 19-May-2022 12:50

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	84.0	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-008

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW4-15-3-WM

Client sampling date / time: 19-May-2022 12:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	86.1	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-009

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW4-15-4-WM

Client sampling date / time: 19-May-2022 11:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	85.9	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-010

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW17-WM

Client sampling date / time: 19-May-2022 12:15

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	86.5	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	108	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-011

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-DUP-2-WM

Client sampling date / time: 19-May-2022 00:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	0.91	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	6.17	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	85.6	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-012

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-DUP-1-WM

Client sampling date / time: 19-May-2022 00:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	88.8	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	106	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-013

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW6-16-3-WM

Client sampling date / time: 19-May-2022 16:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	85.8	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-014

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW37-WM

Client sampling date / time: 19-May-2022 12:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	85.8	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-015

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW5-15-4-WM

Client sampling date / time: 19-May-2022 11:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	85.7	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-016

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW17-2-WM

Client sampling date / time: 19-May-2022 10:28

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	5.20	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	85.0	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-017

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW4-15-2-WM

Client sampling date / time: 19-May-2022 14:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	84.9	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-018

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW5-15-6-WM

Client sampling date / time: 19-May-2022 10:50

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
benzene	71-43-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	25-May-2022	26-May-2022	499799
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
styrene	100-42-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
tetrachloroethylene	127-18-4	1.26	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
toluene	108-88-3	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	25-May-2022	26-May-2022	499799
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	25-May-2022	26-May-2022	499799
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	25-May-2022	26-May-2022	499799
BTEX, total	----	<1.0	1.0	µg/L	E611D	25-May-2022	26-May-2022	499799
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	85.3	1.0	%	E611D	25-May-2022	26-May-2022	499799
difluorobenzene, 1,4-	540-36-3	107	1.0	%	E611D	25-May-2022	26-May-2022	499799

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



Analytical Results

WT2204361-019

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-DUP-3-WM

Client sampling date / time: 19-May-2022 00:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
benzene	71-43-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
styrene	100-42-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethylene	127-18-4	1.39	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
toluene	108-88-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
BTEX, total	----	<1.0	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	96.4	1.0	%	E611D	28-May-2022	28-May-2022	503151
difluorobenzene, 1,4-	540-36-3	98.5	1.0	%	E611D	28-May-2022	28-May-2022	503151

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



Analytical Results

WT2204361-020

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-DUP-4-WM

Client sampling date / time: 19-May-2022 00:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20 OWP.	20	µg/L	E611D	28-May-2022	28-May-2022	503151
benzene	71-43-2	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromodichloromethane	75-27-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromoform	75-25-2	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromomethane	74-83-9	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
carbon tetrachloride	56-23-5	<0.20 OWP.	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
chlorobenzene	108-90-7	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
chloroform	67-66-3	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromochloromethane	124-48-1	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromoethane, 1,2-	106-93-4	<0.20 OWP.	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,2-	95-50-1	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,3-	541-73-1	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,4-	106-46-7	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorodifluoromethane	75-71-8	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,1-	75-34-3	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,2-	107-06-2	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, 1,1-	75-35-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, cis-1,2-	156-59-2	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, trans-1,2-	156-60-5	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloromethane	75-09-2	<1.0 OWP.	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropane, 1,2-	78-87-5	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50 OWP.	0.5	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis-1,3-	10061-01-5	<0.30 OWP.	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, trans-1,3-	10061-02-6	<0.30 OWP.	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
ethylbenzene	100-41-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
hexane, n-	110-54-3	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl ethyl ketone [MEK]	78-93-3	<20 OWP.	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl isobutyl ketone [MIBK]	108-10-1	<20 OWP.	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
styrene	100-42-5	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethylene	127-18-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
toluene	108-88-3	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,1-	71-55-6	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,2-	79-00-5	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethylene	79-01-6	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichlorofluoromethane	75-69-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
vinyl chloride	75-01-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, m+p-	179601-23-1	<0.40 OWP.	0.40	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, o-	95-47-6	<0.30 OWP.	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
xylenes, total	1330-20-7	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
BTEX, total	----	<1.0 OWP.	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	95.4	1.0	%	E611D	28-May-2022	28-May-2022	503151
difluorobenzene, 1,4-	540-36-3	98.2	1.0	%	E611D	28-May-2022	28-May-2022	503151

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



Analytical Results

WT2204361-021

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW2-14-WM

Client sampling date / time: 19-May-2022 10:52

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
benzene	71-43-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
styrene	100-42-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
toluene	108-88-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
BTEX, total	----	<1.0	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	94.8	1.0	%	E611D	28-May-2022	28-May-2022	503151
difluorobenzene, 1,4-	540-36-3	98.2	1.0	%	E611D	28-May-2022	28-May-2022	503151

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



Analytical Results

WT2204361-022

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW3-14-WM

Client sampling date / time: 19-May-2022 10:20

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20 OWP.	20	µg/L	E611D	28-May-2022	28-May-2022	503151
benzene	71-43-2	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromodichloromethane	75-27-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromoform	75-25-2	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromomethane	74-83-9	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
carbon tetrachloride	56-23-5	<0.20 OWP.	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
chlorobenzene	108-90-7	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
chloroform	67-66-3	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromochloromethane	124-48-1	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromoethane, 1,2-	106-93-4	<0.20 OWP.	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,2-	95-50-1	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,3-	541-73-1	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,4-	106-46-7	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorodifluoromethane	75-71-8	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,1-	75-34-3	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,2-	107-06-2	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, 1,1-	75-35-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, cis-1,2-	156-59-2	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, trans-1,2-	156-60-5	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloromethane	75-09-2	<1.0 OWP.	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropane, 1,2-	78-87-5	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50 OWP.	0.5	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis-1,3-	10061-01-5	<0.30 OWP.	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, trans-1,3-	10061-02-6	<0.30 OWP.	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
ethylbenzene	100-41-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
hexane, n-	110-54-3	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl ethyl ketone [MEK]	78-93-3	<20 OWP.	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl isobutyl ketone [MIBK]	108-10-1	<20 OWP.	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
styrene	100-42-5	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethylene	127-18-4	2.91 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
toluene	108-88-3	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,1-	71-55-6	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,2-	79-00-5	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethylene	79-01-6	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichlorofluoromethane	75-69-4	7.85 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
vinyl chloride	75-01-4	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, m+p-	179601-23-1	<0.40 OWP.	0.40	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, o-	95-47-6	<0.30 OWP.	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
xylenes, total	1330-20-7	<0.50 OWP.	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
BTEX, total	----	<1.0 OWP.	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	95.6	1.0	%	E611D	28-May-2022	28-May-2022	503151
difluorobenzene, 1,4-	540-36-3	98.4	1.0	%	E611D	28-May-2022	28-May-2022	503151

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



Analytical Results

WT2204361-023

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW1-14-WM

Client sampling date / time: 19-May-2022 11:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
benzene	71-43-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
styrene	100-42-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethylene	127-18-4	1.03	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
toluene	108-88-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichlorofluoromethane	75-69-4	6.27	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
BTEX, total	----	<1.0	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	94.6	1.0	%	E611D	28-May-2022	28-May-2022	503151
difluorobenzene, 1,4-	540-36-3	97.8	1.0	%	E611D	28-May-2022	28-May-2022	503151

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



Analytical Results

WT2204361-024

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-MW4-15-5-WM

Client sampling date / time: 19-May-2022 13:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
benzene	71-43-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
styrene	100-42-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
toluene	108-88-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
BTEX, total	----	<1.0	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	93.6	1.0	%	E611D	28-May-2022	28-May-2022	503151
difluorobenzene, 1,4-	540-36-3	97.7	1.0	%	E611D	28-May-2022	28-May-2022	503151

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



Analytical Results

WT2204361-025

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-220519-TB-WM

Client sampling date / time: 19-May-2022 00:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
acetone	67-64-1	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
benzene	71-43-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	28-May-2022	28-May-2022	503151
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
styrene	100-42-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
toluene	108-88-3	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	28-May-2022	28-May-2022	503151
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	28-May-2022	28-May-2022	503151
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	28-May-2022	28-May-2022	503151
BTEX, total	----	<1.0	1.0	µg/L	E611D	28-May-2022	28-May-2022	503151
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	93.4	1.0	%	E611D	28-May-2022	28-May-2022	503151
difluorobenzene, 1,4-	540-36-3	98.0	1.0	%	E611D	28-May-2022	28-May-2022	503151

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



QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: WT2204361	Page	: 1 of 7
Client	: GHD Limited	Laboratory	: Waterloo - Environmental
Contact	: Jennifer Balkwill	Account Manager	: Rick Hawthorne
Address	: 455 Phillip Street Waterloo ON Canada N2L 3X2	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: ----	Telephone	: +1 519 886 6910
Project	: 11206432-40	Date Samples Received	: 25-May-2022 13:00
PO	: 735-003054	Issue Date	: 31-May-2022 13:11
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
Quote number	: 11206432-SSOW-735-003054		
No. of samples received	: 25		
No. of samples analysed	: 25		

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
- No Matrix Spike outliers occur.
- 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.



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		
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-DUP-3-WM	E611D	19-May-2022	28-May-2022	----	----		28-May-2022	14 days	10 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-DUP-4-WM	E611D	19-May-2022	28-May-2022	----	----		28-May-2022	14 days	10 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-TB-WM	E611D	19-May-2022	28-May-2022	----	----		28-May-2022	14 days	10 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW17-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	6 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW37-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	6 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW4-15-1-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	6 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW4-15-2-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	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		
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW4-15-3-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	6 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW4-15-6-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	6 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW4-15-7-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	6 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW6-16-3-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	6 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-DUP-1-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	7 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-DUP-2-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	7 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW17-1-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	7 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW17-2-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	7 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW22-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	7 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 (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW4-15-4-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	7 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW5-15.5-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	7 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW5-15-4-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	7 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW5-15-6-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	7 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW5-15-7-WM	E611D	19-May-2022	25-May-2022	----	----		26-May-2022	14 days	7 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW1-14-WM	E611D	19-May-2022	28-May-2022	----	----		28-May-2022	14 days	9 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW2-14-WM	E611D	19-May-2022	28-May-2022	----	----		28-May-2022	14 days	9 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW3-14-WM	E611D	19-May-2022	28-May-2022	----	----		28-May-2022	14 days	9 days	✓	
Volatile Organic Compounds : VOCs (ON List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-220519-MW4-15-5-WM	E611D	19-May-2022	28-May-2022	----	----		28-May-2022	14 days	9 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)							
VOCs (ON List) by Headspace GC-MS	E611D	499799	2	29	6.9	5.0	✔
Laboratory Control Samples (LCS)							
VOCs (ON List) by Headspace GC-MS	E611D	499799	2	29	6.9	5.0	✔
Method Blanks (MB)							
VOCs (ON List) by Headspace GC-MS	E611D	499799	2	29	6.9	5.0	✔
Matrix Spikes (MS)							
VOCs (ON List) by Headspace GC-MS	E611D	499799	2	29	6.9	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").

<i>Analytical Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
VOCs (ON 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.
<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
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 : **WT2204361**
 Client : GHD Limited
 Contact : Jennifer Balkwill
 Address : 455 Phillip Street
 Waterloo ON Canada N2L 3X2
 Telephone : ----
 Project : 11206432-40
 PO : 735-003054
 C-O-C number : ----
 Sampler : ----
 Site : ----
 Quote number : 11206432-SSOW-735-003054
 No. of samples received : 25
 No. of samples analysed : 25

Page : 1 of 14
 Laboratory : Waterloo - Environmental
 Account Manager : Rick Hawthorne
 Address : 60 Northland Road, Unit 1
 Waterloo, Ontario Canada N2V 2B8
 Telephone : +1 519 886 6910
 Date Samples Received : 25-May-2022 13:00
 Date Analysis Commenced : 25-May-2022
 Issue Date : 31-May-2022 13:11

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 Organics, Waterloo, Ontario
Sarah Birch	Team Leader - Volatiles	Waterloo Organics, 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
Volatile Organic Compounds (QC Lot: 499799)											
WT2204340-001	Anonymous	acetone	67-64-1	E611D	20	µg/L	22	24	2	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.50	µg/L	654	663	1.44%	30%	----
		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	1.79	1.77	0.02	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	1.21	1.25	0.04	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	----



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: 499799) - continued											
WT2204340-001	Anonymous	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	----
		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	1.06	1.05	0.01	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	0.57	0.57	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.39	µg/L	<0.63	0.59	0.04	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 503151)											
WT2204361-019	GW-11206432-220519-DU P-3-WM	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	----		



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: 503151) - continued											
WT2204361-019	GW-11206432-220519-DU P-3-WM	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	1.39	1.36	0.03	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	----
		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
Volatile Organic Compounds (QCLot: 499799)						
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	---
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	---



Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 499799) - continued						
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: 503151)						
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	----
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	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 503151) - continued						
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	----



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	
Volatile Organic Compounds (QCLot: 499799)									
acetone	67-64-1	E611D	20	µg/L	100 µg/L	97.0	70.0	130	----
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	120	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	93.0	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	108	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	97.1	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	96.7	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	93.2	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	107	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	105	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	114	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	114	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	119	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	109	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	77.2	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	81.8	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	96.9	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	72.4	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	81.8	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	90.6	70.0	130	----
tetrachloroethane, 1,1,1,2,2-	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	88.9	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	91.5	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	99.9	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: 499799) - continued									
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	94.4	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	115	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	99.6	70.0	130	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	99.2	70.0	130	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	89.1	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	80.2	70.0	130	----
Volatile Organic Compounds (QCLot: 503151)									
acetone	67-64-1	E611D	20	µg/L	100 µg/L	111	70.0	130	----
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	102	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	103	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	99.8	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	121	70.0	130	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	106	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	105	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	91.3	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	91.9	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	92.1	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	94.8	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	78.2	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	97.8	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	81.1	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	102	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: 503151) - continued									
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	98.8	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	95.7	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	99.4	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	95.0	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	91.6	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 $\geq 1 \times$ 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
Volatile Organic Compounds (QCLot: 499799)										
WT2204340-001	Anonymous	acetone	67-64-1	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		benzene	71-43-2	E611D	ND µg/L	100 µg/L	ND	60.0	140	----
		bromodichloromethane	75-27-4	E611D	114 µg/L	100 µg/L	114	60.0	140	----
		bromoform	75-25-2	E611D	95.2 µg/L	100 µg/L	95.2	60.0	140	----
		bromomethane	74-83-9	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	94.9 µg/L	100 µg/L	94.9	60.0	140	----
		chlorobenzene	108-90-7	E611D	93.5 µg/L	100 µg/L	93.5	60.0	140	----
		chloroform	67-66-3	E611D	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		dibromochloromethane	124-48-1	E611D	97.8 µg/L	100 µg/L	97.8	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	98.9 µg/L	100 µg/L	98.9	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	89.2 µg/L	100 µg/L	89.2	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	91.3 µg/L	100 µg/L	91.3	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		dichloromethane	75-09-2	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	103 µg/L	100 µg/L	103	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	78.4 µg/L	100 µg/L	78.4	60.0	140	----
		ethylbenzene	100-41-4	E611D	77.4 µg/L	100 µg/L	77.4	60.0	140	----
		hexane, n-	110-54-3	E611D	92.6 µg/L	100 µg/L	92.6	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	79 µg/L	100 µg/L	79.0	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		styrene	100-42-5	E611D	78.4 µg/L	100 µg/L	78.4	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	87.8 µg/L	100 µg/L	87.8	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	112 µg/L	100 µg/L	112	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	82.4 µg/L	100 µg/L	82.4	60.0	140	----
		toluene	108-88-3	E611D	88.2 µg/L	100 µg/L	88.2	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: 499799) - continued										
WT2204340-001	Anonymous	trichloroethane, 1,1,1-	71-55-6	E611D	89.1 µg/L	100 µg/L	89.1	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	97.8 µg/L	100 µg/L	97.8	60.0	140	----
		trichloroethylene	79-01-6	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	87.2 µg/L	100 µg/L	87.2	60.0	140	----
		vinyl chloride	75-01-4	E611D	90.1 µg/L	100 µg/L	90.1	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	166 µg/L	200 µg/L	83.3	60.0	140	----
		xylene, o-	95-47-6	E611D	76.2 µg/L	100 µg/L	76.2	60.0	140	----
Volatile Organic Compounds (QCLot: 503151)										
WT2204361-019	GW-11206432-220519-DUP -3-WM	acetone	67-64-1	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		benzene	71-43-2	E611D	96.0 µg/L	100 µg/L	96.0	60.0	140	----
		bromodichloromethane	75-27-4	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		bromoform	75-25-2	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		bromomethane	74-83-9	E611D	97.6 µg/L	100 µg/L	97.6	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	99.0 µg/L	100 µg/L	99.0	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	101 µg/L	100 µg/L	101	60.0	140	----
		dibromochloromethane	124-48-1	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	98.5 µg/L	100 µg/L	98.5	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	94.6 µg/L	100 µg/L	94.6	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	93.1 µg/L	100 µg/L	93.1	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	99.8 µg/L	100 µg/L	99.8	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	98.3 µg/L	100 µg/L	98.3	60.0	140	----
		dichloromethane	75-09-2	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		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	83.8 µg/L	100 µg/L	83.8	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	82.2 µg/L	100 µg/L	82.2	60.0	140	----
		ethylbenzene	100-41-4	E611D	87.1 µg/L	100 µg/L	87.1	60.0	140	----
		hexane, n-	110-54-3	E611D	95.2 µg/L	100 µg/L	95.2	60.0	140	----
methyl ethyl ketone [MEK]	78-93-3	E611D	87 µg/L	100 µg/L	87.3	60.0	140	----		
methyl isobutyl ketone [MIBK]	108-10-1	E611D	73 µg/L	100 µg/L	73.1	60.0	140	----		
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	95.1 µg/L	100 µg/L	95.1	60.0	140	----		

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 Work Order : WT2204361
 Client : GHD Limited
 Project : 11206432-40



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: 503151) - continued										
WT2204361-019	GW-11206432-220519-DUP-3-WM	styrene	100-42-5	E611D	75.7 µg/L	100 µg/L	75.7	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	98.7 µg/L	100 µg/L	98.7	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	92.7 µg/L	100 µg/L	92.7	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	93.1 µg/L	100 µg/L	93.1	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	97.6 µg/L	100 µg/L	97.6	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	94.1 µg/L	100 µg/L	94.1	60.0	140	----
		trichloroethylene	79-01-6	E611D	94.6 µg/L	100 µg/L	94.6	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		vinyl chloride	75-01-4	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	179 µg/L	200 µg/L	89.3	60.0	140	----
		xylene, o-	95-47-6	E611D	87.0 µg/L	100 µg/L	87.0	60.0	140	----

Chain of Custody (COC) / Analytical Request Form

COC Number: **22 -**

Page **5** of **3**

Canada Toll Free: 1 800 668 9878



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Contact and company name below will appear on the final report		Reports / Recipients			Turnaround Time (TAT) Requested			AFFIX ALS BARCODE LABEL HERE (ALS use only)		
Company: GHD Limited		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			<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.					
Contact: Jennifer Balkwill		Merge QC/QCI Reports with COA <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.					
Phone: 519-884-0510		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			Date and Time Required for all E&P TATs:					
Company address below will appear on the final report		Email 1 or Fax: jennifer.balkwill@ghd.com			For all tests with rush TATs requested, please contact your AM to confirm availability.					
Street: 455 Phillip Street		Email 2: aditya.khandekar@ghd.com			Analysis Request					
City/Province: Waterloo		Email 3: wesley.moore@ghd.com			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below					
Postal Code: N2L 3X2		Invoice Recipients			NUMBER OF CONTAINERS Trip Blank					
Invoice To: Same as Report To <input type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX						SAMPLES ON HOLD EXTENDED STORAGE REQUIRED SUSPECTED HAZARD (see notes)		
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Email 1 or Fax								
Company:		Email 2								
Contact:		Oil and Gas Required Fields (client use)								
Project Information		AFE/Cost Center:								
ALS Account # / Quote #:		PO#:								
Job #: 11206432-40		Major/Minor Code:								
PO / AFE: 735-003054		Routing Code:								
LSD:		Requisitioner:								
ALS Lab Work Order # (ALS use only): WT 2204361		Location:								
		ALS Contact:		Sampler:						
Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)		
GW-11206432-220519-TB-WM		19-May-22	-	Trip Blank	2	R				
Drinking Water (DW) Samples ¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)			SAMPLE RECEIPT DETAILS (ALS use only)					
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					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					
Are samples for human consumption/ use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					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 Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A					
					INITIAL COOLER TEMPERATURES °C					
					FINAL COOLER TEMPERATURES °C					
					2.5					
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)					
Released by: Wesley Moore		Date: May 25/22	Time: 1:30	Received by:	Date:	Time:	Received by: JA	Date: 05/25/22	Time: 1:40	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : WT2212030

Client : GHD Limited
Contact : Jennifer Balkwill
Address : 455 Phillip Street
Waterloo, ON Canada N2L 3X2
E-mail : Jennifer.Balkwill@ghd.com
Telephone : ----
Facsimile : ----
Project : 11206432-40
Purchase order number : 735-003054
C-O-C number : ----
Site : ----
Sampler :

Laboratory : Waterloo - Environmental
Contact : Rick Hawthorne
Address : 60 Northland Road, Unit 1
Waterloo, Ontario Canada N2V 2B8
E-mail : Rick.Hawthorne@ALSGlobal.com
Telephone : +1 519 886 6910
Facsimile : +1 519 886 9047
Page : 1 of 7
Quote number : WT2022GHDL1000073 (11206432-SSOW-735-003054)
QC Level : ALS Canada Standard Quality Control

Dates

Date Samples Received : 26-Aug-2022 11:30
Client Requested Due Date : 02-Sep-2022
Issue Date : 26-Aug-2022
Scheduled Reporting Date : 02-Sep-2022

Delivery Details

Mode of Delivery : Client Drop Off
No. of coolers/boxes : ----
Receipt Detail :
Security Seal : Not Available
Temperature : 20.8 - Ice present
No. of samples received / analyzed : 28 / 28

General Comments

- This report contains the following information:
- Sample Container(s)/Preservation Non-Compliances (if any)
- Summary of Sample(s) and Requested Analysis
- Proactive Holding Time Report
- Requested Deliverables
ALS standard storage times are as follows (from date of receipt at testing laboratory): 30 calendar days for soil and water samples; 6 months for tissue/biota samples; 14 days for air samples or re-usable media; and 3 days for microbiological samples.
Temperature is recorded in °C unless otherwise noted.



Sample Container(s)/Preservation Non-Compliances (if any)

All comparisons are made against pretreatment/preservation practices published by CCME, BC ENV, Ontario MOE, Environment Canada, Health Canada, US EPA, APHA Standard Methods, ASTM, or ISO, and comply with provincial requirements for the laboratory location.

- No sample container/preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component.

Matrix: **Water**

Laboratory sample ID Client sampling date / time Client sample ID

Laboratory sample ID	Client sampling date / time	Client sample ID	Water - ON60 VOCs (O.Reg. 153) in Water
WT2212030-001	23-Aug-2022 08:30	W-11206432-220823-MW4-15-1-WM	✓
WT2212030-002	23-Aug-2022 09:00	W-11206432-220823-MW4-15-2-WM	✓
WT2212030-003	23-Aug-2022 09:30	W-11206432-220823-MW4-15-3-WM	✓
WT2212030-004	23-Aug-2022 10:00	W-11206432-220823-MW4-15-4-WM	✓
WT2212030-005	23-Aug-2022 10:30	W-11206432-220823-MW4-15-5-WM	✓
WT2212030-006	23-Aug-2022 11:00	W-11206432-220823-MW4-15-6-WM	✓
WT2212030-007	23-Aug-2022 11:30	W-11206432-220823-MW4-15-7-WM	✓
WT2212030-008	23-Aug-2022 12:00	W-11206432-220823-MW5-15-1-WM	✓
WT2212030-009	23-Aug-2022 12:30	W-11206432-220823-MW5-15-2-WM	✓
WT2212030-010	23-Aug-2022 01:00	W-11206432-220823-MW5-15-3-WM	✓
WT2212030-011	23-Aug-2022 01:30	W-11206432-220823-MW5-15-4-WM	✓
WT2212030-012	23-Aug-2022 02:00	W-11206432-220823-MW5-15-5-WM	✓
WT2212030-013	23-Aug-2022 02:30	W-11206432-220823-MW5-15-6-WM	✓
WT2212030-014	23-Aug-2022 03:00	W-11206432-220823-MW5-15-7-WM	✓
WT2212030-015	23-Aug-2022	W-11206432-220823-DUP-3-WM	✓



			Water - ON60 VOCs (O.Reg.153) in Water
WT2212030-016	23-Aug-2022	W-11206432-220823-DUP-1-WM	✓
WT2212030-017	23-Aug-2022 03:00	W-11206432-220823-MW17-WM	✓
WT2212030-018	23-Aug-2022	W-11206432-220823-TB-2-WM	✓
WT2212030-019	22-Aug-2022	W-11206432-220822-TB-1-WM	✓
WT2212030-020	22-Aug-2022 12:20	W-11206432-220822-MW22-WM	✓
WT2212030-021	22-Aug-2022	W-11206432-220822-DUP-4-WM	✓
WT2212030-022	22-Aug-2022 11:50	W-11206432-220822-MW1-14-WM	✓
WT2212030-023	22-Aug-2022 10:30	W-11206432-220822-MW17-2-WM	✓
WT2212030-024	22-Aug-2022 11:30	W-11206432-220822-MW3-14-WM	✓
WT2212030-025	22-Aug-2022 10:50	W-11206432-220822-MW17-1-WM	✓
WT2212030-026	22-Aug-2022 12:50	W-11206432-220822-MW37-WM	✓
WT2212030-027	22-Aug-2022 09:35	W-11206432-220822-MW2-14-WM	✓
WT2212030-028	22-Aug-2022	W-11206432-220822-DUP-2-WM	✓

Proactive Holding Time Report

All sample(s) for this submission were received within the recommended holding times for the requested tests.



Requested Deliverables

Accounts Payable

Tax Invoice (INVOICE (CAN)) Email Invoicing-Canada@ghd.com

Aditya Khandekar

ALS Excel Report (ALS_MTABXL_CAN) Email Aditya.Khandekar@ghd.com
 Certificate of Analysis (Portrait) (COA - Portrait (CAN)) Email Aditya.Khandekar@ghd.com
 GHD Canada EQUIS format (GHD_EQUIS_CAN) Email Aditya.Khandekar@ghd.com
 Interpretive Quality Control Report (QCI (CAN)) Email Aditya.Khandekar@ghd.com
 Quality Control (QC (CAN)) Email Aditya.Khandekar@ghd.com
 Sample Receipt Notification with Analytes & LORs (SRN - Long (CAN)) Email Aditya.Khandekar@ghd.com

Jennifer Balkwill

ALS Excel Report (ALS_MTABXL_CAN) Email Jennifer.Balkwill@ghd.com
 Certificate of Analysis (Portrait) (COA - Portrait (CAN)) Email Jennifer.Balkwill@ghd.com
 GHD Canada EQUIS format (GHD_EQUIS_CAN) Email Jennifer.Balkwill@ghd.com
 Interpretive Quality Control Report (QCI (CAN)) Email Jennifer.Balkwill@ghd.com
 Pre-Invoice Canada (PRE-INVOICE (CAN)) Email Jennifer.Balkwill@ghd.com
 Quality Control (QC (CAN)) Email Jennifer.Balkwill@ghd.com
 Sample Receipt Notification with Analytes & LORs (SRN - Long (CAN)) Email Jennifer.Balkwill@ghd.com

Jennifer Balkwill (Invoicing)

Tax Invoice (INVOICE (CAN)) Email jennifer.balkwill@ghd.com

Jesse Orth

ALS Excel Report (ALS_MTABXL_CAN) Email Jesse.Orth@ghd.com
 Certificate of Analysis (Portrait) (COA - Portrait (CAN)) Email Jesse.Orth@ghd.com
 GHD Canada EQUIS format (GHD_EQUIS_CAN) Email Jesse.Orth@ghd.com
 Interpretive Quality Control Report (QCI (CAN)) Email Jesse.Orth@ghd.com
 Quality Control (QC (CAN)) Email Jesse.Orth@ghd.com
 Sample Receipt Notification with Analytes & LORs (SRN - Long (CAN)) Email Jesse.Orth@ghd.com

PMAs Waterloo Group EDD

GHD Canada EQUIS format (GHD_EQUIS_CAN) Email ALSWTPMA@ALSGlobal.com

Tom Guoth

ALS Excel Report (ALS_MTABXL_CAN) Email Tom.Guoth@ghd.com
 Certificate of Analysis (Portrait) (COA - Portrait (CAN)) Email Tom.Guoth@ghd.com

Issue Date : 26-Aug-2022
Page : 5 of 7
Work Order : WT2212030 Amendment 0
Client : GHD Limited



GHD Canada EQUiS format (GHD_EQUiS_CAN)	Email	Tom.Guoth@ghd.com
Interpretive Quality Control Report (QCI (CAN))	Email	Tom.Guoth@ghd.com
Quality Control (QC (CAN))	Email	Tom.Guoth@ghd.com
Sample Receipt Notification with Analytes & LORs (SRN - Long (CAN))	Email	Tom.Guoth@ghd.com

Wesley Moore

ALS Excel Report (ALS_MTABXL_CAN)	Email	Wesley.Moore@ghd.com
Certificate of Analysis (Portrait) (COA - Portrait (CAN))	Email	Wesley.Moore@ghd.com
GHD Canada EQUiS format (GHD_EQUiS_CAN)	Email	Wesley.Moore@ghd.com
Interpretive Quality Control Report (QCI (CAN))	Email	Wesley.Moore@ghd.com
Quality Control (QC (CAN))	Email	Wesley.Moore@ghd.com
Sample Receipt Notification with Analytes & LORs (SRN - Long (CAN))	Email	Wesley.Moore@ghd.com



Summary of Requested Analysis with Methods and Limit of Reporting (LOR)

Sale item	Method	Method Reference	Laboratory	Analyte	LOR	Unit
VOCs (O.Reg.153) in Water [Water]						
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	Acetone	20	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	benzene	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	bromodichloromethane	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	bromoform	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	bromomethane	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	BTEX, total	1	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	carbon tetrachloride	0.2	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	chlorobenzene	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	chloroform	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dibromochloromethane	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dibromoethane, 1,2-	0.2	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichlorobenzene, 1,2-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichlorobenzene, 1,3-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichlorobenzene, 1,4-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichlorodifluoromethane	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichloroethane, 1,1-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichloroethane, 1,2-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichloroethylene, 1,1-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichloroethylene, cis-1,2-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichloroethylene, trans-1,2-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichloromethane	1	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichloropropane, 1,2-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichloropropylene, cis+trans-1,3-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichloropropylene, cis-1,3-	0.3	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	dichloropropylene, trans-1,3-	0.3	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	ethylbenzene	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	hexane, n-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	methyl ethyl ketone [MEK]	20	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	methyl isobutyl ketone [MIBK]	20	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	methyl-tert-butyl ether [MTBE]	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	styrene	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	tetrachloroethane, 1,1,1,2-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	tetrachloroethane, 1,1,2,2-	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	tetrachloroethylene	0.5	µg/L
E611D		VOCs (ON List) by Headspace GC-MS	Waterloo	toluene	0.5	µg/L

Issue Date : 26-Aug-2022
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Work Order : WT2212030 Amendment 0
Client : GHD Limited



E611D	VOCs (ON List) by Headspace GC-MS	Waterloo	trichloroethane, 1,1,1-	0.5	µg/L
E611D	VOCs (ON List) by Headspace GC-MS	Waterloo	trichloroethane, 1,1,2-	0.5	µg/L
E611D	VOCs (ON List) by Headspace GC-MS	Waterloo	trichloroethylene	0.5	µg/L
E611D	VOCs (ON List) by Headspace GC-MS	Waterloo	trichlorofluoromethane	0.5	µg/L
E611D	VOCs (ON List) by Headspace GC-MS	Waterloo	vinyl chloride	0.5	µg/L
E611D	VOCs (ON List) by Headspace GC-MS	Waterloo	xylene, m+p-	0.4	µg/L
E611D	VOCs (ON List) by Headspace GC-MS	Waterloo	xylene, o-	0.3	µg/L
E611D	VOCs (ON List) by Headspace GC-MS	Waterloo	xylenes, total	0.5	µg/L

Chain of Custody (COC) / Analytical Request Form

COC Number: 22 -

Page 1 of 3

Canada Toll Free: 1 800 668 9878

Environmental Division
Waterloo
Work Order Reference
WT2212030



Telephone : +1 519 886 6910

Report To Contact and company name below will appear on the final report		Reports / Recipients			Turnaround Time (TAT) Requested																																																																																																									
Company:	GHD Limited (Acct. 13791)	Select Report Format:	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL) <input type="checkbox"/> Merge QC/QCI Reports with COA <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		<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.																																																																																																									
Contact:	Kory Ozgun	Select Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax kory.ozgun@ghd.com Email 2 See Ssow/PO Email 3		Additional fees may apply to rush requests on weekends, s																																																																																																									
Phone:	519-884-0510	Date and Time Required for all E&P TATs:																																																																																																												
Company address below will appear on the final report		For all tests with rush TATs requested, please contact your AM to confirm availability.																																																																																																												
Street:	455 Phillip St.	Analysis Request																																																																																																												
City/Province:	Waterloo, ON	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																																																																												
Postal Code:	N2L 3X2	<table border="1" style="width:100%; height: 150px;"> <tr> <td rowspan="10" style="writing-mode: vertical-rl; transform: rotate(180deg);">NUMBER OF CONTAINERS</td> <td colspan="10"></td> <td rowspan="10" style="writing-mode: vertical-rl; transform: rotate(180deg);">SAMPLES ON HOLD</td> <td rowspan="10" style="writing-mode: vertical-rl; transform: rotate(180deg);">EXTENDED STORAGE REQUIRED</td> <td rowspan="10" style="writing-mode: vertical-rl; transform: rotate(180deg);">SUSPECTED HAZARD (see notes)</td> </tr> <tr><td colspan="10"></td></tr> </table>					NUMBER OF CONTAINERS											SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)																																																																																										
NUMBER OF CONTAINERS											SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)																																																																																																	
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Recipients																																																																																																												
	Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax Invocing-Canada@ghd.com Email 2																																																																																																											
Company:	GHD Limited (Acct. 13791)																																																																																																													
Contact:																																																																																																														
Project Information		Oil and Gas Required Fields (client use)																																																																																																												
ALS Account # / Quote #:	WT2022GHDL1000073	AFE/Cost Center:	PO#																																																																																																											
Job #:	11206432-40	Major/Minor Code:	Routing Code:																																																																																																											
PO / AFE:	735-003054	Requisitioner:																																																																																																												
LSD:		Location:																																																																																																												
ALS Lab Work Order # (ALS use only): WT2212030 PBA		ALS Contact:	Sampler:																																																																																																											
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	VOCs																																																																																																									
	W-11206432-220823-MW4-15-1-WM	23-Aug-22	8:30	Groundwater	2	R																																																																																																								
	W-11206432-220823-MW4-15-2-WM	23-Aug-22	9:00	Groundwater	2	R																																																																																																								
	W-11206432-220823-MW4-15-3-WM	23-Aug-22	9:30	Groundwater	2	R																																																																																																								
	W-11206432-220823-MW4-15-4-WM	23-Aug-22	10:00	Groundwater	2	R																																																																																																								
	W-11206432-220823-MW4-15-5-WM	23-Aug-22	10:30	Groundwater	2	R																																																																																																								
	W-11206432-220823-MW4-15-6-WM	23-Aug-22	11:00	Groundwater	2	R																																																																																																								
	W-11206432-220823-MW4-15-7-WM	23-Aug-22	11:30	Groundwater	2	R																																																																																																								
	W-11206432-220823-MW5-15-1-WM	23-Aug-22	12:00	Groundwater	2	R																																																																																																								
	W-11206432-220823-MW5-15-2-WM	23-Aug-22	12:30	Groundwater	2	R																																																																																																								
	W-11206432-220823-MW5-15-3-WM	23-Aug-22	1:00	Groundwater	2	R																																																																																																								
	W-11206432-220823-MW5-15-4-WM	23-Aug-22	1:30	Groundwater	2	R																																																																																																								
	W-11206432-220823-MW5-15-5-WM	23-Aug-22	2:00	Groundwater	2	R																																																																																																								
Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)			SAMPLE RECEIPT DETAILS (ALS use only)																																																																																																									
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					Cooling Method: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> ICE <input type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED																																																																																																									
Are samples for human consumption/ use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO																																																																																																									
					Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A																																																																																																									
					INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C																																																																																																							
					20.8		20.8																																																																																																							
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)																																																																																																									
Released by:	Wesley Moore	Date:	24-Aug-22	Time:	4:00	Received by:	BB																																																																																																							
		Date:		Time:		Date:	082522																																																																																																							
		Date:		Time:		Date:	11:30																																																																																																							



CERTIFICATE OF ANALYSIS

<p>Work Order : WT2224461</p> <p>Client : GHD Limited</p> <p>Contact : Jennifer Balkwill</p> <p>Address : 455 Phillip Street Waterloo ON Canada N2L 3X2</p> <p>Telephone : ----</p> <p>Project : 11206432</p> <p>PO : 735-003054</p> <p>C-O-C number : ----</p> <p>Sampler : CLIENT</p> <p>Site : ----</p> <p>Quote number : 11206432-SSOW-735-003054</p> <p>No. of samples received : 24</p> <p>No. of samples analysed : 24</p>	<p>Page : 1 of 31</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Rick Hawthorne</p> <p>Address : 60 Northland Road, Unit 1 Waterloo ON Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 08-Dec-2022 10:00</p> <p>Date Analysis : 11-Dec-2022</p> <p>Commenced : 11-Dec-2022</p> <p>Issue Date : 14-Dec-2022 17:01</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
- Surrogate Control Limits

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	Organics, Waterloo, Ontario



Page : 2 of 31
Work Order : WT2224461
Client : GHD Limited
Project : 11206432

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.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances

LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
µg/L	micrograms per litre

>: greater than.

<: less than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

Matrix spike recovery was outside ALS DQO. LCS results were acceptable.



Analytical Results

WT2224461-001

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW17

Client sampling date / time: 06-Dec-2022 12:45

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
tetrachloroethane, 1,1,1,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775192
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	97.7	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775192
difluorobenzene, 1,4-	540-36-3	103	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775192



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

Analytical Results

WT2224461-002

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW22

Client sampling date / time: 06-Dec-2022 12:20

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	92.6	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-002

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW22

Client sampling date / time: 06-Dec-2022 12:20

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds Surrogates								
difluorobenzene, 1,4-	540-36-3	89.3	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-003

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-DUP4

Client sampling date / time: 06-Dec-2022

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-003

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-DUP4

Client sampling date / time: 06-Dec-2022

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	92.9	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	89.2	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-004

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW37

Client sampling date / time: 06-Dec-2022 12:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-004

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW37

Client sampling date / time: 06-Dec-2022 12:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
dichloropropylene, trans-1,3-ethylbenzene	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	108-88-3	0.63	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	93.3	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	88.7	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-005

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW1-14

Client sampling date / time: 06-Dec-2022 13:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-005

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW1-14

Client sampling date / time: 06-Dec-2022 13:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	0.69	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	12.2	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	92.8	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	88.4	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-006

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-DUP2

Client sampling date / time: 06-Dec-2022

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-006

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-DUP2

Client sampling date / time: 06-Dec-2022

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	0.65	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	11.8	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	92.5	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	88.6	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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



Analytical Results

WT2224461-007

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW2-14

Client sampling date / time: 06-Dec-2022 10:15

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	93.1	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	89.2	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197



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

Analytical Results

WT2224461-008

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW3-14

Client sampling date / time: 06-Dec-2022 10:55

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	2.47	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	9.27	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	92.5	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-008

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW3-14

Client sampling date / time: 06-Dec-2022 10:55

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds Surrogates								
difluorobenzene, 1,4-	540-36-3	89.3	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-009

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-DUP1

Client sampling date / time: 06-Dec-2022

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	2.24	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-009

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-DUP1

Client sampling date / time: 06-Dec-2022

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	8.13	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	92.2	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	89.6	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-010

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW17-1

Client sampling date / time: 06-Dec-2022 11:15

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-010

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW17-1

Client sampling date / time: 06-Dec-2022 11:15

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
dichloropropylene, trans-1,3-ethylbenzene	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	92.0	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	90.3	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-011

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW17-2

Client sampling date / time: 06-Dec-2022 11:08

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	1.61	0.50	µg/L	E611D	11-Dec-2022	13-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-011

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW17-2

Client sampling date / time: 06-Dec-2022 11:08

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	90.5	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	91.0	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-012

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-TB1

Client sampling date / time: 06-Dec-2022

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-012

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-TB1

Client sampling date / time: 06-Dec-2022

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	91.0	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	91.2	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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



Analytical Results

WT2224461-013

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-1

Client sampling date / time: 06-Dec-2022 10:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	90.6	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	91.8	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197



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

Analytical Results

WT2224461-014

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-2

Client sampling date / time: 06-Dec-2022 10:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	91.0	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-014

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-2

Client sampling date / time: 06-Dec-2022 10:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds Surrogates								
difluorobenzene, 1,4-	540-36-3	92.0	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-015

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-3

Client sampling date / time: 06-Dec-2022 10:45

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-015

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-3

Client sampling date / time: 06-Dec-2022 10:45

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	90.5	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	92.3	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-016

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-4

Client sampling date / time: 06-Dec-2022 11:20

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-016

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-4

Client sampling date / time: 06-Dec-2022 11:20

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
dichloropropylene, trans-1,3-ethylbenzene	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	88.3	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	92.8	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-017

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-5

Client sampling date / time: 06-Dec-2022 11:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-017

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-5

Client sampling date / time: 06-Dec-2022 11:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	87.3	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	93.1	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-018

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-6

Client sampling date / time: 06-Dec-2022 12:35

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-018

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-6

Client sampling date / time: 06-Dec-2022 12:35

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	87.7	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	93.0	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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



Analytical Results

WT2224461-019

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW4-15-7

Client sampling date / time: 06-Dec-2022 12:55

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	87.1	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	93.1	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197



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

Analytical Results

WT2224461-020

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW5-15-4

Client sampling date / time: 06-Dec-2022 01:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	87.6	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-020

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW5-15-4

Client sampling date / time: 06-Dec-2022 01:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds Surrogates								
difluorobenzene, 1,4-	540-36-3	93.5	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-021

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW5-15-5

Client sampling date / time: 06-Dec-2022 02:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
benzene	71-43-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
styrene	100-42-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethane, 1,1,1,2-	79-34-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
toluene	108-88-3	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197



Analytical Results

WT2224461-021

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW5-15-5

Client sampling date / time: 06-Dec-2022 02:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
BTEX, total	----	<1.0	1.0	µg/L	E611D	11-Dec-2022	11-Dec-2022	775197
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	85.8	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197
difluorobenzene, 1,4-	540-36-3	93.7	1.0	%	E611D	11-Dec-2022	11-Dec-2022	775197

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

Analytical Results

WT2224461-022

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW5-15-6

Client sampling date / time: 06-Dec-2022 02:20

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
benzene	71-43-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709



Analytical Results

WT2224461-022

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW5-15-6

Client sampling date / time: 06-Dec-2022 02:20

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
dichloropropylene, trans-1,3-ethylbenzene	10061-02-6	<0.30	0.30	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
hexane, n-	100-41-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
methyl ethyl ketone [MEK]	110-54-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
methyl isobutyl ketone [MIBK]	78-93-3	<20	20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
methyl-tert-butyl ether [MTBE]	108-10-1	<20	20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
styrene	1634-04-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
tetrachloroethane, 1,1,1,2-	100-42-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
tetrachloroethane, 1,1,2,2-	630-20-6	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
tetrachloroethylene	79-34-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
toluene	127-18-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichloroethane, 1,1,1-	108-88-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichloroethane, 1,1,2-	71-55-6	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichloroethylene	79-00-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichlorofluoromethane	79-01-6	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
vinyl chloride	75-69-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
xylene, m+p-	75-01-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
xylene, o-	179601-23-1	<0.40	0.40	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
xylenes, total	95-47-6	<0.30	0.30	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
BTEX, total	1330-20-7	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
	----	<1.0	1.0	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	90.5	1.0	%	E611D	12-Dec-2022	12-Dec-2022	775709
difluorobenzene, 1,4-	540-36-3	91.4	1.0	%	E611D	12-Dec-2022	12-Dec-2022	775709

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

Analytical Results

WT2224461-023

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW5-15-7

Client sampling date / time: 06-Dec-2022 02:50

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
benzene	71-43-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709



Analytical Results

WT2224461-023

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-MW5-15-7

Client sampling date / time: 06-Dec-2022 02:50

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
styrene	100-42-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
toluene	108-88-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
BTEX, total	----	<1.0	1.0	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	89.6	1.0	%	E611D	12-Dec-2022	12-Dec-2022	775709
difluorobenzene, 1,4-	540-36-3	93.2	1.0	%	E611D	12-Dec-2022	12-Dec-2022	775709

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

Analytical Results

WT2224461-024

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-DUP3

Client sampling date / time: 06-Dec-2022

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709



Analytical Results

WT2224461-024

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-221206-DUP3

Client sampling date / time: 06-Dec-2022

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
benzene	71-43-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
bromoform	75-25-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
chloroform	67-66-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
styrene	100-42-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
toluene	108-88-3	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
BTEX, total	----	<1.0	1.0	µg/L	E611D	12-Dec-2022	12-Dec-2022	775709
Volatile Organic Compounds Surrogates								
bromofluorobenzene, 4-	460-00-4	89.0	1.0	%	E611D	12-Dec-2022	12-Dec-2022	775709
difluorobenzene, 1,4-	540-36-3	93.4	1.0	%	E611D	12-Dec-2022	12-Dec-2022	775709

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



QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : WT2224461</p> <p>Client : GHD Limited</p> <p>Contact : Jennifer Balkwill</p> <p>Address : 455 Phillip Street Waterloo ON Canada N2L 3X2</p> <p>Telephone : ----</p> <p>Project : 11206432</p> <p>PO : 735-003054</p> <p>C-O-C number : ----</p> <p>Sampler : CLIENT</p> <p>Site : ----</p> <p>Quote number : 11206432-SSOW-735-003054</p> <p>No. of samples received : 24</p> <p>No. of samples analysed : 24</p>	<p>Page : 1 of 8</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Rick Hawthorne</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 : 08-Dec-2022 10:00</p> <p>Issue Date : 14-Dec-2022 17:02</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 Method Blank value outliers occur.
- No Duplicate outliers occur.
- 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
Laboratory Control Sample (LCS) Recoveries								
Volatile Organic Compounds	QC-775197-002	----	Acetone	67-64-1	E611D	141 % MES	70.0-130%	Recovery greater than upper control limit
Volatile Organic Compounds	QC-775197-002	----	dichloroethane, 1,2-	107-06-2	E611D	136 % MES	70.0-130%	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								
Volatile Organic Compounds	WT2224461-002	GW-11206432-2212 06-MW22	Acetone	67-64-1	E611D	150 % MES	60.0-140%	Recovery greater than upper data quality objective
Volatile Organic Compounds	Anonymous	Anonymous	dichlorodifluoromethane	75-71-8	E611D	22.5 % RRQC	60.0-140%	Recovery less than lower data quality objective
Volatile Organic Compounds	Anonymous	Anonymous	vinyl chloride	75-01-4	E611D	41.8 % RRQC	60.0-140%	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).
RRQC	Refer to report comments for information regarding this QC result.



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	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-221206-DUP1	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-221206-DUP2	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-221206-DUP4	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-221206-MW1-14	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-221206-MW17	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-221206-MW22	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-221206-MW37	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 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		
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW4-15-5	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	5 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW4-15-6	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	5 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW4-15-7	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	5 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-TB1	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	5 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-DUP3	E611D	06-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	6 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW17-1	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	6 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW17-2	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	6 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW2-14	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	6 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW3-14	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	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		
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW4-15-1	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	6 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW4-15-2	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	6 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW4-15-3	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	6 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW4-15-4	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	6 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW5-15-4	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	6 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW5-15-5	E611D	06-Dec-2022	11-Dec-2022	----	----		11-Dec-2022	14 days	6 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW5-15-6	E611D	06-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	7 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-221206-MW5-15-7	E611D	06-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	7 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 (%)		
			QC	Regular	Actual	Expected	Evaluation
Analytical Methods							
Laboratory Duplicates (DUP)							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	775192	3	54	5.5	5.0	✔
Laboratory Control Samples (LCS)							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	775192	3	54	5.5	5.0	✔
Method Blanks (MB)							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	775192	3	54	5.5	5.0	✔
Matrix Spikes (MS)							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	775192	3	54	5.5	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").

<i>Analytical Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
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.
<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
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

<p>Work Order : WT2224461</p> <p>Client : GHD Limited</p> <p>Contact : Jennifer Balkwill</p> <p>Address : 455 Phillip Street Waterloo ON Canada N2L 3X2</p> <p>Telephone :</p> <p>Project : 11206432</p> <p>PO : 735-003054</p> <p>C-O-C number : ----</p> <p>Sampler : CLIENT ----</p> <p>Site : ----</p> <p>Quote number : 11206432-SSOW-735-003054</p> <p>No. of samples received : 24</p> <p>No. of samples analysed : 24</p>	<p>Page : 1 of 18</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Rick Hawthorne</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 : 08-Dec-2022 10:00</p> <p>Date Analysis Commenced : 11-Dec-2022</p> <p>Issue Date : 14-Dec-2022 17:02</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 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 Organics, Waterloo, Ontario

Page : 2 of 18
Work Order : WT2224461
Client : GHD Limited
Project : 11206432



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
Volatile Organic Compounds (QC Lot: 775192)											
WT2224416-001	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	----



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: 775192) - continued											
WT2224416-001	Anonymous	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	----
		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	<0.30	0	Diff <2x LOR	----	
Volatile Organic Compounds (QC Lot: 775197)											
WT2224461-002	GW-11206432-221206-MW 22	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	<0.30	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: 775197) - continued											
WT2224461-002	GW-11206432-221206-MW 22	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	----
		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	----		
Volatile Organic Compounds (QC Lot: 775709)											
WT2224468-001	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	----		



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: 775709) - continued											
WT2224468-001	Anonymous	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	----
		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
Volatile Organic Compounds (QCLot: 775192)						
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	----
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	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 775192) - continued						
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: 775197)						
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	----
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	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 775197) - continued						
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: 775709)						
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	----
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	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 775709) - continued						
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	----



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				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 775192)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	116	70.0	130	----
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	121	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	98.6	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	103	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	112	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	117	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	112	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	87.9	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	114	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	116	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	98.1	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	103	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	109	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	107	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	105	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	95.8	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	102	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	112	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
toluene	108-88-3	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: 775192) - continued									
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	109	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	105	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	83.1	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	103	70.0	130	----
Volatile Organic Compounds (QCLot: 775197)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	# 141	70.0	130	MES
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	120	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	121	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	109	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	110	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	125	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	99.7	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	104	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	119	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	114	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	117	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	91.1	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	113	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	# 136	70.0	130	MES
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	122	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	116	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	121	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	115	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	125	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	127	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	102	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	112	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	118	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	111	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	127	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: 775197) - continued									
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	93.1	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	88.3	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	95.0	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	129	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	113	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	99.2	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	118	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	85.0	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	102	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	112	70.0	130	----
Volatile Organic Compounds (QCLot: 775709)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	101	70.0	130	----
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	88.4	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	96.7	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	83.3	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	95.2	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	94.5	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	88.8	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	88.5	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	95.0	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	95.9	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	96.7	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	85.1	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	88.4	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	90.7	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	82.3	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	80.4	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	83.5	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	84.6	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	80.8	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	87.3	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	91.2	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: 775709) - continued									
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	95.5	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	89.1	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	80.5	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	90.6	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	93.0	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	92.6	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	91.6	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	91.9	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	96.5	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	91.1	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	92.6	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	80.2	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	92.9	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	72.2	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	97.0	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	96.4	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.

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: 775192)										
WT2224416-001	Anonymous	Acetone	67-64-1	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		benzene	71-43-2	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		bromodichloromethane	75-27-4	E611D	118 µg/L	100 µg/L	118	60.0	140	----
		bromoform	75-25-2	E611D	94.1 µg/L	100 µg/L	94.1	60.0	140	----
		bromomethane	74-83-9	E611D	94.6 µg/L	100 µg/L	94.6	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		chlorobenzene	108-90-7	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		chloroform	67-66-3	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		dibromochloromethane	124-48-1	E611D	113 µg/L	100 µg/L	113	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	74.1 µg/L	100 µg/L	74.1	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	110 µg/L	100 µg/L	110	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	92.6 µg/L	100 µg/L	92.6	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		dichloromethane	75-09-2	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		ethylbenzene	100-41-4	E611D	99.3 µg/L	100 µg/L	99.3	60.0	140	----
		hexane, n-	110-54-3	E611D	89.2 µg/L	100 µg/L	89.2	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	97 µg/L	100 µg/L	96.7	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		styrene	100-42-5	E611D	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	96.0 µg/L	100 µg/L	96.0	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: 775192) - continued										
WT2224416-001	Anonymous	tetrachloroethylene	127-18-4	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		toluene	108-88-3	E611D	98.4 µg/L	100 µg/L	98.4	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	106 µg/L	100 µg/L	106	60.0	140	----
		trichloroethylene	79-01-6	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	98.3 µg/L	100 µg/L	98.3	60.0	140	----
		vinyl chloride	75-01-4	E611D	75.4 µg/L	100 µg/L	75.4	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	200 µg/L	200 µg/L	99.8	60.0	140	----
		xylene, o-	95-47-6	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	----
Volatile Organic Compounds (QCLot: 775197)										
WT2224461-002	GW-11206432-221206-MW2 2	Acetone	67-64-1	E611D	150 µg/L	100 µg/L	150	60.0	140	MES
		benzene	71-43-2	E611D	118 µg/L	100 µg/L	118	60.0	140	----
		bromodichloromethane	75-27-4	E611D	122 µg/L	100 µg/L	122	60.0	140	----
		bromoform	75-25-2	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		bromomethane	74-83-9	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		chlorobenzene	108-90-7	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		chloroform	67-66-3	E611D	125 µg/L	100 µg/L	125	60.0	140	----
		dibromochloromethane	124-48-1	E611D	99.7 µg/L	100 µg/L	99.7	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	119 µg/L	100 µg/L	119	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	114 µg/L	100 µg/L	114	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	116 µg/L	100 µg/L	116	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	84.6 µg/L	100 µg/L	84.6	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	113 µg/L	100 µg/L	113	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	140 µg/L	100 µg/L	140	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	119 µg/L	100 µg/L	119	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	120 µg/L	100 µg/L	120	60.0	140	----
		dichloromethane	75-09-2	E611D	116 µg/L	100 µg/L	116	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	125 µg/L	100 µg/L	125	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	129 µg/L	100 µg/L	129	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		ethylbenzene	100-41-4	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		hexane, n-	110-54-3	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: 775197) - continued										
WT2224461-002	GW-11206432-221206-MW2 2	methyl ethyl ketone [MEK]	78-93-3	E611D	125 µg/L	100 µg/L	125	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	125 µg/L	100 µg/L	125	60.0	140	----
		styrene	100-42-5	E611D	90.3 µg/L	100 µg/L	90.3	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	86.4 µg/L	100 µg/L	86.4	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	116 µg/L	100 µg/L	116	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	91.2 µg/L	100 µg/L	91.2	60.0	140	----
		toluene	108-88-3	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	127 µg/L	100 µg/L	127	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	114 µg/L	100 µg/L	114	60.0	140	----
		trichloroethylene	79-01-6	E611D	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	113 µg/L	100 µg/L	113	60.0	140	----
		vinyl chloride	75-01-4	E611D	80.7 µg/L	100 µg/L	80.7	60.0	140	----
xylene, m+p-	179601-23-1	E611D	202 µg/L	200 µg/L	101	60.0	140	----		
xylene, o-	95-47-6	E611D	111 µg/L	100 µg/L	111	60.0	140	----		
Volatile Organic Compounds (QCLot: 775709)										
WT2224468-001	Anonymous	Acetone	67-64-1	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		benzene	71-43-2	E611D	87.2 µg/L	100 µg/L	87.2	60.0	140	----
		bromodichloromethane	75-27-4	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		bromoform	75-25-2	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		bromomethane	74-83-9	E611D	62.8 µg/L	100 µg/L	62.8	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	88.6 µg/L	100 µg/L	88.6	60.0	140	----
		chlorobenzene	108-90-7	E611D	94.2 µg/L	100 µg/L	94.2	60.0	140	----
		chloroform	67-66-3	E611D	89.0 µg/L	100 µg/L	89.0	60.0	140	----
		dibromochloromethane	124-48-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	93.4 µg/L	100 µg/L	93.4	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	93.6 µg/L	100 µg/L	93.6	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	91.2 µg/L	100 µg/L	91.2	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	93.4 µg/L	100 µg/L	93.4	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	22.5 µg/L	100 µg/L	22.5	60.0	140	RRQC
		dichloroethane, 1,1-	75-34-3	E611D	87.0 µg/L	100 µg/L	87.0	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	71.8 µg/L	100 µg/L	71.8	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	83.0 µg/L	100 µg/L	83.0	60.0	140	----
dichloroethylene, trans-1,2-	156-60-5	E611D	80.6 µg/L	100 µg/L	80.6	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: 775709) - continued										
WT2224468-001	Anonymous	dichloromethane	75-09-2	E611D	84.2 µg/L	100 µg/L	84.2	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	83.2 µg/L	100 µg/L	83.2	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	93.9 µg/L	100 µg/L	93.9	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		ethylbenzene	100-41-4	E611D	90.7 µg/L	100 µg/L	90.7	60.0	140	----
		hexane, n-	110-54-3	E611D	75.2 µg/L	100 µg/L	75.2	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	91 µg/L	100 µg/L	90.6	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		styrene	100-42-5	E611D	92.2 µg/L	100 µg/L	92.2	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	89.2 µg/L	100 µg/L	89.2	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	83.2 µg/L	100 µg/L	83.2	60.0	140	----
		toluene	108-88-3	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	89.3 µg/L	100 µg/L	89.3	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	97.9 µg/L	100 µg/L	97.9	60.0	140	----
		trichloroethylene	79-01-6	E611D	76.8 µg/L	100 µg/L	76.8	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	77.4 µg/L	100 µg/L	77.4	60.0	140	----
		vinyl chloride	75-01-4	E611D	41.8 µg/L	100 µg/L	41.8	60.0	140	RRQC
		xylene, m+p-	179601-23-1	E611D	187 µg/L	200 µg/L	93.3	60.0	140	----
		xylene, o-	95-47-6	E611D	93.3 µg/L	100 µg/L	93.3	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).
RRQC	Refer to report comments for information regarding this QC result.

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

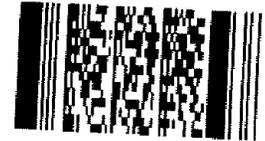


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Per 1 2

Environmental Division
Waterloo
Work Order Reference
WT2224461



Telephone: +1 519 886 6910

Report To Contact and company name below will appear on the final report		Reports / Recipients			Turnaround Time (TAT) Requested		
Company:	GHD Ltd. (GHDL100)	Select Report Format:	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)	<input checked="" type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges apply			
Contact:	Jennifer Balkwill	Merge QC/QCI Reports with COA	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A	<input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surcharge			
Phone:	519 884 0510	<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		<input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surcharge			
Company address below will appear on the final report		Select Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	<input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surcharge			
Street:	455 Phillip St.	Email 1 or Fax:	Jennifer.Balkwill@ghd.com	<input type="checkbox"/> 1 day [E] if received by 3pm M-F - 100% rush surcharge			
City/Province:	Waterloo, ON	Email 2:	See SSOW/PO	Same day [E2] if received by 10am M-S - 200% rush surcharges may apply to rush requests on weekends, statutory holidays and routine tests			
Postal Code:	N2L 3X2	Email 3:		Date and Time Required for all E&P TATs:			
Invoice To:	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Recipients			For tests that can not be performed according to schedule		
	Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	Analy			
Company:	GHD Ltd. (GHDL100)	Email 1 or Fax:	AccountsPayableCDN@ghd.com	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP)			
Contact:		Email 2:		NUMBER OF CONTAINERS			
Project Information		Oil and Gas Required Fields (client use):					
ALS Account # / Quote #:	WT2022GHDL1000073	AFE/Cost Center:	PO#				
Job #:	11208432	Major/Minor Code:	Routing Code:				
PO / AFE:	735-003054	Requisitioner:					
LSD:		Location:					
ALS Lab Work Order # (lab use only):	WT2224461	ALS Contact:	Rick H	Sampler:			
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	VOCs	Triolefins - VOCs	
	GW-120 6432-22206-MW17	06-Dec-22	12:15	Water	2	✓	
	- MW22		12:20	Water		✓	
	- DUP-4			Water		✓	
	- MW37		12:30	Water		✓	
	- MW1-14		13:00	Water		✓	
	- DUP-2			Water		✓	
	- MW2-14		10:15	Water		✓	
	- MW3-14		10:55	Water		✓	
	- DUP-1			Water		✓	
	- MW17-1		11:15	Water		✓	
	- MW17-2		11:08	Water		✓	
	- TR-1			Water		✓	
Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)			SAMPLE RECEIPT DETAILS (lab use only)		
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					Cooling Method: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> ICE <input type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED		
Are samples for human consumption/ use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					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 Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A		
					INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C
							3-5
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:
W. Moore	Dec 7 22	12:00					12/08/22
					Time: 10:00		

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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.

VW-166



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Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

Canada Toll Free: 1 800 668 9878

Page 3 of 3

Report To Contact and company name below will appear on the final report		Reports / Recipients			Turnaround Time (TAT) Requested				AFFIX ALS BARCODE LABEL HERE (ALS use only)																																													
Company:	GHD Ltd. (GHDL100)	Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)			<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																																																	
Contact:	Jennifer Balkwill	Merge QC/QCI Reports with COA <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A																																																				
Phone:	519 884 0510	<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked																																																				
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			Date and Time Required for all E&P TATs:																																																	
Street:	455 Phillip St.	Email 1 or Fax Jennifer.Balkwill@ghd.com																																																				
City/Province:	Waterloo, ON	Email 2 See SSOWPO																																																				
Postal Code:	N2L 3X2	Email 3																																																				
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Recipients			For tests that can not be performed according to the TAT requested, you will be contacted.																																																	
	Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			Analysis Request																																																	
Company:	GHD Ltd. (GHDL100)	Email 1 or Fax AccountsPayableCDN@ghd.com			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below <table border="1"> <tr> <th rowspan="2">NUMBER OF CONTAINERS</th> <th colspan="10"></th> <th rowspan="2">SAMPLES ON HOLD</th> <th rowspan="2">EXTENDED STORAGE REQUIRED</th> <th rowspan="2">SUSPECTED HAZARD (see notes)</th> </tr> <tr> <th>VOCs</th> <th colspan="10">Trip Blanks _VOCs</th> </tr> <tr> <td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>							NUMBER OF CONTAINERS											SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)	VOCs	Trip Blanks _VOCs																											
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Job #:	11206432	Major/Minor Code:		Routing Code:																																																		
PO / AFE:	735-003054	Requisitioner:																																																				
LSD:		Location:																																																				
ALS Lab Work Order # (lab use only): WT20224461		ALS Contact:	Rick H	Sampler:																																																		
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type																																																		
	GW-11206432-221206-MWS-15-4	06-Dec-22	1:30	Water																																																		
	- MWS-15-5		2:00	Water																																																		
	- MWS-15-6		2:20	Water																																																		
	- MWS-15-7		2:50	Water																																																		
	- DUF-3			Water																																																		
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Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)			SAMPLE RECEIPT DETAILS (lab use only)																																																	
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					Cooling Method: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> ICE <input type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED																																																	
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					Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A																																																	
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								35																																														
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)																																																	
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:																																					
W. Moore	Dec 7 22	12:00								12/08/22	10:00																																											

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CERTIFICATE OF ANALYSIS

Work Order	: WT2305429	Page	: 1 of 33
Amendment	: 1		
Client	: GHD Limited	Laboratory	: Waterloo - Environmental
Contact	: Jennifer Balkwill	Account Manager	: Rick Hawthorne
Address	: 455 Phillip Street Waterloo ON Canada N2L 3X2	Address	: 60 Northland Road, Unit 1 Waterloo ON Canada N2V 2B8
Telephone	: 604 748 3661	Telephone	: +1 519 886 6910
Project	: 11206432	Date Samples Received	: 07-Mar-2023 08:50
PO	: 735-003054	Date Analysis	: 08-Mar-2023
		Commenced	
C-O-C number	: ----	Issue Date	: 14-Mar-2023 10:19
Sampler	: CLIENT		
Site	: ----		
Quote number	: 11206432-SSOW-735-003054		
No. of samples received	: 26		
No. of samples analysed	: 26		

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
- Surrogate Control Limits

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>
Sarah Birch	VOC Section Supervisor	Organics, 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.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
µg/L	micrograms per litre

>: greater than.

<: less than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

14-Mar-2023. ID updated for GW-11206432-230302-JK-MW1-14. All analysis results are as per the previous report.



Analytical Results

WT2305429-001

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW17

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	2.51	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	2.5	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	97.1	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383



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

Analytical Results

WT2305429-002

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW1-14

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	1.08	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	7.23	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	97.4	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-002

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW1-14

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds Surrogates								
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-003

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-DUP-2

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	1.06	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-003

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-DUP-2

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	7.59	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.6	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-004

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW17-1

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	0.85	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-004

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW17-1

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	98.0	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-005

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW22

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	1.13	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-005

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW22

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	97.7	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-006

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-DUP-4

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-006

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-DUP-4

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	1.09	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.8	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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



Analytical Results

WT2305429-007

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW37

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.6	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	99.8	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383



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

Analytical Results

WT2305429-008

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW3-14

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.6	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-008

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW3-14

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds Surrogates								
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-009

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-4

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-009

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-4

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.6	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	99.8	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-010

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-3

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-010

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-3

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.1	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-011

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-7

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-011

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-7

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	97.1	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	99.8	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-012

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-1

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-012

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-1

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	97.2	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	99.5	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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



Analytical Results

WT2305429-013

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-6

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.7	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	99.9	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383



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

Analytical Results

WT2305429-014

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-2

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.7	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-014

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-2

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds Surrogates								
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-015

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-5

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-015

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW4-15-5

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	95.9	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	99.9	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-016

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW5-15-7

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-016

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW5-15-7

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.8	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-017

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW5-15-6

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-017

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW5-15-6

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.1	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	99.6	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-018

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-DUP-3

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-018

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-DUP-3

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.6	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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



Analytical Results

WT2305429-019

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-JK-MW17-2

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	96.8	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383
Difluorobenzene, 1,4-	540-36-3	99.8	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383



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

Analytical Results

WT2305429-020

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW5-15-3

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
BTEX, total	----	<1.0	1.0	µg/L	E611D	08-Mar-2023	08-Mar-2023	856383
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	95.5	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383



Analytical Results

WT2305429-020

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW5-15-3

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds Surrogates								
Difluorobenzene, 1,4-	540-36-3	100	1.0	%	E611D	08-Mar-2023	08-Mar-2023	856383

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

Analytical Results

WT2305429-021

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW5-15-4

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653



Analytical Results

WT2305429-021

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW5-15-4

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
BTEX, total	----	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	103	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653
Difluorobenzene, 1,4-	540-36-3	86.7	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653

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

Analytical Results

WT2305429-022

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW2-14

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653



Analytical Results

WT2305429-022

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-MW2-14

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichlorofluoromethane	75-69-4	2.60	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
BTEX, total	----	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	103	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653
Difluorobenzene, 1,4-	540-36-3	86.3	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653

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

Analytical Results

WT2305429-023

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-DUP-1

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653



Analytical Results

WT2305429-023

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230302-JK-DUP-1

Client sampling date / time: 02-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichlorofluoromethane	75-69-4	2.59	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
BTEX, total	----	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	102	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653
Difluorobenzene, 1,4-	540-36-3	86.4	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653

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

Analytical Results

WT2305429-024

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW5-15-2

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653



Analytical Results

WT2305429-024

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW5-15-2

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
BTEX, total	----	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	103	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653
Difluorobenzene, 1,4-	540-36-3	86.1	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653

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



Analytical Results

WT2305429-025

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-MW5-15-5

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
BTEX, total	----	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	102	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653
Difluorobenzene, 1,4-	540-36-3	86.1	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653



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

Analytical Results

WT2305429-026

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: GW-11206432-230301-WM-TRIP-1

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
BTEX, total	----	<1.0	1.0	µg/L	E611D	09-Mar-2023	09-Mar-2023	857653
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	103	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653



Page : 33 of 33
Work Order : WT2305429 Amendment 1
Client : GHD Limited
Project : 11206432

Analytical Results

WT2305429-026

Sub-Matrix: **Water**

(Matrix: **Water**)

Client sample ID: GW-11206432-230301-WM-TRIP-1

Client sampling date / time: 01-Mar-2023

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds Surrogates								
Difluorobenzene, 1,4-	540-36-3	86.3	1.0	%	E611D	09-Mar-2023	09-Mar-2023	857653

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

QUALITY CONTROL INTERPRETIVE REPORT

<p>Work Order : WT2305429</p> <p>Amendment : 1</p> <p>Client : GHD Limited</p> <p>Contact : Jennifer Balkwill</p> <p>Address : 455 Phillip Street Waterloo ON Canada N2L 3X2</p> <p>Telephone : 604 748 3661</p> <p>Project : 11206432</p> <p>PO : 735-003054</p> <p>C-O-C number : ----</p> <p>Sampler : CLIENT</p> <p>Site : ----</p> <p>Quote number : 11206432-SSOW-735-003054</p> <p>No. of samples received : 26</p> <p>No. of samples analysed : 26</p>	<p>Page : 1 of 8</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Rick Hawthorne</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 : 07-Mar-2023 08:50</p> <p>Issue Date : 14-Mar-2023 10:20</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
- No Matrix Spike outliers occur.
- 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.



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	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-230302-JK-DUP-2	E611D	02-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-230302-JK-DUP-4	E611D	02-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-230302-JK-MW1-14	E611D	02-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-230302-JK-MW17	E611D	02-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-230302-JK-MW17-1	E611D	02-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-230302-JK-MW22	E611D	02-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-11206432-230302-JK-MW3-14	E611D	02-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	7 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) GW-11206432-230302-JK-MW37	E611D	02-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	7 days	✓	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-JK-MW17-2	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 days	✓	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-DUP-3	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 days	✓	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW4-15-1	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 days	✓	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW4-15-2	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 days	✓	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW4-15-3	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 days	✓	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW4-15-4	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 days	✓	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW4-15-5	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 days	✓	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW4-15-6	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 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) GW-11206432-230301-WM-MW4-15-7	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW5-15-3	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW5-15-6	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW5-15-7	E611D	01-Mar-2023	08-Mar-2023	----	----		08-Mar-2023	14 days	8 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230302-JK-DUP-1	E611D	02-Mar-2023	09-Mar-2023	----	----		09-Mar-2023	14 days	8 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230302-JK-MW2-14	E611D	02-Mar-2023	09-Mar-2023	----	----		09-Mar-2023	14 days	8 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW5-15-2	E611D	01-Mar-2023	09-Mar-2023	----	----		09-Mar-2023	14 days	9 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW5-15-4	E611D	01-Mar-2023	09-Mar-2023	----	----		09-Mar-2023	14 days	9 days	✔	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS											
Glass vial (sodium bisulfate) GW-11206432-230301-WM-MW5-15-5	E611D	01-Mar-2023	09-Mar-2023	----	----		09-Mar-2023	14 days	9 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) GW-11206432-230301-WM-TRIP-1	E611D	01-Mar-2023	09-Mar-2023	----	----		09-Mar-2023	14 days	9 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 (%)		
			QC	Regular	Actual	Expected	Evaluation
Analytical Methods							
Laboratory Duplicates (DUP)							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	856383	2	36	5.5	5.0	✔
Laboratory Control Samples (LCS)							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	856383	2	36	5.5	5.0	✔
Method Blanks (MB)							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	856383	2	36	5.5	5.0	✔
Matrix Spikes (MS)							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	856383	2	36	5.5	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").

<i>Analytical Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
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.
<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
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	: WT2305429	Page	: 1 of 14
Amendment	: 1		
Client	: GHD Limited	Laboratory	: Waterloo - Environmental
Contact	: Jennifer Balkwill	Account Manager	: Rick Hawthorne
Address	: 455 Phillip Street Waterloo ON Canada N2L 3X2	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	:	Telephone	: +1 519 886 6910
Project	: 11206432	Date Samples Received	: 07-Mar-2023 08:50
PO	: 735-003054	Date Analysis Commenced	: 08-Mar-2023
C-O-C number	: ----	Issue Date	: 14-Mar-2023 10:20
Sampler	: CLIENT 604 748 3661		
Site	: ----		
Quote number	: 11206432-SSOW-735-003054		
No. of samples received	: 26		
No. of samples analysed	: 26		

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>
Sarah Birch	VOC Section Supervisor	Waterloo Organics, Waterloo, Ontario

Page : 2 of 14
Work Order : WT2305429 Amendment 1
Client : GHD Limited
Project : 11206432



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
Volatile Organic Compounds (QC Lot: 856383)											
WT2305429-001	GW-11206432-230302-JK-MW17	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	----



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: 856383) - continued											
WT2305429-001	GW-11206432-230302-JK-MW17	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	2.51	2.42	0.09	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	<0.30	0	Diff <2x LOR	----	

Volatile Organic Compounds (QC Lot: 857653)											
WT2305527-001	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	0.51	0.52	0.01	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	1.34	1.36	0.02	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	247	253	2.25%	30%	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	1.59	1.62	0.03	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	----



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: 857653) - continued											
WT2305527-001	Anonymous	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	----
		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	6.78	6.89	1.61%	30%	----
		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	78.7	80.0	1.61%	30%	----
		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
Volatile Organic Compounds (QCLot: 856383)						
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	----
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	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 856383) - continued						
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: 857653)						
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	----
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	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 857653) - continued						
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	----



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				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 856383)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	90.6	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	94.2	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	92.7	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	86.2	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	100.0	60.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	99.9	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	93.7	70.0	130	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	95.0	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	88.7	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	87.2	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	96.4	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	98.6	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	98.7	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	94.2	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	97.5	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	90.9	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	93.6	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	92.9	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	96.0	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	96.7	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	89.6	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	88.5	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	87.4	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	94.4	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	97.5	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	85.3	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	80.0	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	91.8	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	92.8	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	85.2	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	99.4	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	93.9	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: 856383) - continued									
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	96.9	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	88.8	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	98.1	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	100	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	92.3	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	94.6	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	92.6	70.0	130	----
Volatile Organic Compounds (QCLot: 857653)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	95.0	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	89.0	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	87.8	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	85.4	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	96.5	60.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	97.9	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	87.8	70.0	130	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	92.3	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	99.0	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	89.3	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	95.8	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	97.7	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	98.3	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	76.1	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	88.4	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	93.7	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	84.9	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	96.0	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	90.2	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	94.4	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	83.0	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	78.4	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	75.6	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	95.1	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	94.5	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	83.0	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	74.1	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	93.2	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: 857653) - continued									
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	87.0	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	96.0	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	90.1	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	96.8	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	92.4	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	94.8	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	96.3	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	79.5	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	96.1	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	96.2	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.

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: 856383)										
WT2305429-001	GW-11206432-230302-JK-M W17	Acetone	67-64-1	E611D	94 µg/L	100 µg/L	94.5	60.0	140	----
		Benzene	71-43-2	E611D	95.1 µg/L	100 µg/L	95.1	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Bromoform	75-25-2	E611D	90.8 µg/L	100 µg/L	90.8	60.0	140	----
		Bromomethane	74-83-9	E611D	96.9 µg/L	100 µg/L	96.9	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	99.0 µg/L	100 µg/L	99.0	60.0	140	----
		Chlorobenzene	108-90-7	E611D	94.1 µg/L	100 µg/L	94.1	60.0	140	----
		Chloroform	67-66-3	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	91.9 µg/L	100 µg/L	91.9	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	90.7 µg/L	100 µg/L	90.7	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	96.6 µg/L	100 µg/L	96.6	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	86.2 µg/L	100 µg/L	86.2	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	97.5 µg/L	100 µg/L	97.5	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	94.7 µg/L	100 µg/L	94.7	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	91.3 µg/L	100 µg/L	91.3	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	94.0 µg/L	100 µg/L	94.0	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	94.2 µg/L	100 µg/L	94.2	60.0	140	----
		Dichloromethane	75-09-2	E611D	98.4 µg/L	100 µg/L	98.4	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	92.1 µg/L	100 µg/L	92.1	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	91.8 µg/L	100 µg/L	91.8	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	90.1 µg/L	100 µg/L	90.1	60.0	140	----
		Ethylbenzene	100-41-4	E611D	92.8 µg/L	100 µg/L	92.8	60.0	140	----
		Hexane, n-	110-54-3	E611D	93.6 µg/L	100 µg/L	93.6	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	91 µg/L	100 µg/L	91.0	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	88 µg/L	100 µg/L	87.7	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	92.5 µg/L	100 µg/L	92.5	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	91.9 µg/L	100 µg/L	91.9	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: 856383) - continued										
WT2305429-001	GW-11206432-230302-JK-M W17	Tetrachloroethylene	127-18-4	E611D	95.5 µg/L	100 µg/L	95.5	60.0	140	----
		Toluene	108-88-3	E611D	92.4 µg/L	100 µg/L	92.4	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	92.2 µg/L	100 µg/L	92.2	60.0	140	----
		Trichloroethylene	79-01-6	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		Vinyl chloride	75-01-4	E611D	87.6 µg/L	100 µg/L	87.6	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	186 µg/L	200 µg/L	93.1	60.0	140	----
		Xylene, o-	95-47-6	E611D	92.3 µg/L	100 µg/L	92.3	60.0	140	----
Volatile Organic Compounds (QCLot: 857653)										
WT2305527-001	Anonymous	Acetone	67-64-1	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Benzene	71-43-2	E611D	93.1 µg/L	100 µg/L	93.1	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	91.1 µg/L	100 µg/L	91.1	60.0	140	----
		Bromoform	75-25-2	E611D	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Bromomethane	74-83-9	E611D	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Chlorobenzene	108-90-7	E611D	88.5 µg/L	100 µg/L	88.5	60.0	140	----
		Chloroform	67-66-3	E611D	96.1 µg/L	100 µg/L	96.1	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	98.6 µg/L	100 µg/L	98.6	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	98.8 µg/L	100 µg/L	98.8	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	78.5 µg/L	100 µg/L	78.5	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	92.3 µg/L	100 µg/L	92.3	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	97.9 µg/L	100 µg/L	97.9	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	87.2 µg/L	100 µg/L	87.2	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	ND µg/L	100 µg/L	ND	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	90.8 µg/L	100 µg/L	90.8	60.0	140	----
		Dichloromethane	75-09-2	E611D	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	86.2 µg/L	100 µg/L	86.2	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	76.4 µg/L	100 µg/L	76.4	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	72.7 µg/L	100 µg/L	72.7	60.0	140	----
		Ethylbenzene	100-41-4	E611D	94.8 µg/L	100 µg/L	94.8	60.0	140	----
Hexane, n-	110-54-3	E611D	95.7 µg/L	100 µg/L	95.7	60.0	140	----		



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Volatile Organic Compounds (QCLot: 857653) - continued										
WT2305527-001	Anonymous	Methyl ethyl ketone [MEK]	78-93-3	E611D	84 µg/L	100 µg/L	84.2	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	75 µg/L	100 µg/L	75.1	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Styrene	100-42-5	E611D	86.0 µg/L	100 µg/L	86.0	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	89.1 µg/L	100 µg/L	89.1	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Toluene	108-88-3	E611D	97.5 µg/L	100 µg/L	97.5	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		Trichloroethylene	79-01-6	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Vinyl chloride	75-01-4	E611D	85.0 µg/L	100 µg/L	85.0	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	192 µg/L	200 µg/L	96.1	60.0	140	----
		Xylene, o-	95-47-6	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----



Environmental Division
Waterloo
Work Order Reference
WT2305429



Telephone : +1 519 886 6910

Contact and company name below will appear on the final report

Report To
Company: GHD Ltd. (GHDL100)
Contact: Jennifer Balkwill
Phone: 519 884 0510

Company address below will appear on the final report

Street: 455 Phillip St.
City / Province: Waterloo, ON
Postal Code: N2L 3X2

Invoice To
Same as Report To YES NO
Copy of Invoice with Report YES NO

Company: GHD Ltd. (GHDL100)
Contact:

Project Information
ALS Account # / Quote #: WT2022GHDL1000073
Job #: 11206432
PO / AFE: 735-003054
LSD:

Reports / Recipients
Select Report Format: PDF EXCEL EDD (DIGITAL)
Merge QC/QCI Reports with COA YES NO N/A
 Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: EMAIL MAIL FAX

Email 1 or Fax: Jennifer.Balkwill@ghd.com
Email 2: See SSOW/PO
Email 3:

Invoice Recipients
Select Invoice Distribution: EMAIL MAIL FAX

Email 1 or Fax: AccountsPayableCDN@ghd.com
Email 2:

Oil and Gas Required Fields (client use)
AFE/Cost Center: PO#
Major/Minor Code: Routing Code:
Requisitioner:
Location:

ALS Contact: Rick H
Sampler:

Turnaround Time (TAT) Requested

Routine [R] if received by 3pm M-F - no surcharges apply
 4 day [P4] if received by 3pm M-F - 20% rush surcharge
 3 day [P3] if received by 3pm M-F - 25% rush surcharge
 2 day [P2] if received by 3pm M-F - 50% rush surcharge
 1 day [E] if received by 3pm M-F - 100% rush surcharge
 Same day [E2] if received by 10am M-S - 200% rush surcharge
 fees may apply to rush requests on weekends, statutory hol routine tests

Date and Time Required for all E&P TATs:

For tests that can not be performed according to:

Analysis
Indicate Filtered (F), Preserved (P) or Filtered (F)

NUMBER OF CONTAINERS

NO.	DATE	TIME	SAMPLE TYPE	NO. CONTAINERS	TRIP BLANKS	VOCs	OTHER	ANALYSIS
1	02-MAR-23	AM	Water	2	✓			
2			Water	1	✓			
3			Water	1	✓			
4			Water	1	✓			
5			Water	1	✓			
6			Water	1	✓			
7			Water	1	✓			
8			Water	1	✓			
9	01-MAR-23		Water	1	✓			
10			Water	1	✓			
11			Water	1	✓			
12			Water	1	✓			

SAMPLES ON HOLD

EXTENDED STORAGE REQUIRE

SUSPECTED HAZARD (see notes)

ALS Lab Work Order # (lab use only): **WT2305429**

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type
	GW-11206432-230302-JK-MW17	02-MAR-23	AM	Water
	GW-11206432-230302-JK-MW14			Water
	GW-11206432-230302-JK-DVP-2			Water
	GW-11206432-230302-JK-MW17-1			Water
	GW-11206432-230302-JK-MW22			Water
	GW-11206432-230302-JK-DVP-4			Water
	GW-11206432-230302-JK-MW37			Water
	GW-11206432-230302-JK-MW3-14			Water
	GW-11206432-230301-WM-MW4-15-4	01-MAR-23		Water
	GW-11206432-230301-WM-MW4-15-3			Water
	GW-11206432-230301-WM-MW4-15-7			Water
	GW-11206432-230301-WM-MW4-15-1			Water

SAMPLE RECEIPT DETAILS (lab use only)

Cooling Method: NONE ICE ICE PACKS FROZEN COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: YES NO

Cooler Custody Seals Intact: YES N/A Sample Custody Seals Intact: YES N/A

INITIAL COOLER TEMPERATURES °C: _____ FINAL COOLER TEMPERATURES °C: **8.3**

Drinking Water (DW) Samples (client use)

Are samples taken from a Regulated DW System? YES NO

Are samples for human consumption/ use? YES NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SHIPMENT RELEASE (client use)
by: **Jacob Kempf** Date: **06-MAR-23**

INITIAL SHIPMENT RECEPTION (lab use only)
Received by: _____ Date: _____

FINAL SHIPMENT RECEPTION (lab use only)
Received by: **[Signature]** Date: **03/08/23** Time: **7:50**

BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION
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.
If samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

WT-141 554



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Contact and company name below will appear on the final report		Reports / Recipients			Turnaround Time (TAT) Requested				AFFIX ALS BARCODE LABEL HERE (ALS use only)				
Report To: GHD Ltd. (GHDL100)		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			<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.								
Company: Jennifer Balkwill		Merge QC/QCI Reports with COA <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A			Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.								
Contact: 519 884 0510		<input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			Date and Time Required for all E&P TATs:								
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			For all tests with rush TATs requested, please contact your AM to confirm availability.								
Address: 455 Phillip St		Email 1 or Fax: Jennifer.Balkwill@ghd.com			Analysis Request								
City/Province: Waterloo, ON		Email 2: See SSOV/PO			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below				NUMBER OF CONTAINERS (VOCs) SAMPLES ON HOLD EXTENDED STORAGE REQUIRED SUSPECTED HAZARD (see notes)				
Postal Code: N2L 3X2		Email 3:											
Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Invoice Recipients											
Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Select Invoice Distribution: <input type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX											
Company: GHD Ltd. (GHDL100)		Email 1 or Fax: AccountsPayableCDN@ghd.com											
Contact: GHD Ltd. (GHDL100)		Email 2:											
Project Information		Oil and Gas Required Fields (client use)											
ALS Account # / Quote #: WT2022GHDL1000073		AFE/Cost Center: PO#											
Job #: 11206432		Major/Minor Code: Routing Code:											
PO / AFE: 735-003054		Requisitioner:											
LSD:		Location:											
ALS Lab Work Order # (ALS use only):		ALS Contact:			Sampler:								
Sample Identification and/or Coordinates		Date			Time			Sample Type					
(This description will appear on the report)		(dd-mmm-yy)			(hh:mm)								
GW-11206432-230301-WM-MW4-15-6		1-Mar-23			AM			Water			2 R		
GW-11206432-230301-WM-MW4-15-2		1-Mar-23			AM			Water			2 R		
GW-11206432-230301-WM-MW4-15-5		1-Mar-23			AM			Water			2 R		
GW-11206432-230301-WM-MW5-15-7		1-Mar-23			AM			Water			2 R		
GW-11206432-230301-WM-MW5-15-6		1-Mar-23			AM			Water			2 R		
GW-11206432-230301-WM-DUP-3		1-Mar-23			AM			Water			2 R		
GW-11206432-230301-JK-MW17-2		1-Mar-23			AM			Water			2 R		
GW-11206432-230301-WM-MW5-15-3		1-Mar-23			AM			Water			2 R		
GW-11206432-230301-WM-MW5-15-4		1-Mar-23			AM			Water			2 R		
GW-11206432-230302-JK-MW2-14		2-Mar-23			AM			Water			2 R		
GW-11206432-230302-JK-DUP-1		2-Mar-23			AM			Water			2 R		
GW-11206432-230301-WM-MW5-15-2		1-Mar-23			AM			Water			2 R		
Drinking Water (DW) Samples¹ (client use)		Notes / Specify Limits for result evaluation by selecting from drop-down below			SAMPLE RECEIPT DETAILS (ALS use only)								
(Excel COC 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								
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO								
Are samples for human consumption/ use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A								
					INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C					
								8.5					
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)								
Released by: <i>Jacob Kempf</i>		Received by:			Received by:			Received by: <i>[Signature]</i>					
Date: 06-MAR-23		Date:			Date:			Date: 03/07/23					
Time:		Time:			Time:			Time: 8:50					

BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION
 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.
 If samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Appendix B

Mann Kendall Trend Analysis

Mann-Kendall Trend Test Analysis

User Selected Options
 Date/Time of Computation ProUCL 5.2 4/10/2023 9:36:21 AM
 From File 11206432 PCE Data for ProUCL (for trends)_Updated 4-10-2023.xls
 Full Precision OFF
 Confidence Coefficient 0.975
 Level of Significance 0.025

PCE for Trend (NDs=tied) MW1-14 (Layer 1)**General Statistics**

Number of Events Reported (m)	32
Number of Missing Events	6
Number of Reported Events Used	26
Number Values Reported (n)	32
Number Values Missing	6
Number Values Used	26
Minimum	0.5
Maximum	2.17
Mean	1.024
Geometric Mean	0.932
Median	0.99
Standard Deviation	0.467
Coefficient of Variation	0.456

Mann-Kendall Test

M-K Test Value (S)	-15
Critical Value (0.025)	-1.96
Standard Deviation of S	45.13
Standardized Value of S	-0.31
Approximate p-value	0.378

0.8 = P-value for 2-tailed test (increasing or decreasing)

Insufficient evidence to identify a significant trend at the specified level of significance.

PCE for Trend (NDs=tied) MW3-14 (Layer 3)**General Statistics**

Number of Events Reported (m)	33
Number of Missing Events	2
Number of Reported Events Used	31
Number Values Reported (n)	33
Number Values Missing	2
Number Values Used	31
Minimum	0.5
Maximum	5.6
Mean	2.585
Geometric Mean	1.963
Median	2.6
Standard Deviation	1.562
Coefficient of Variation	0.604

Mann-Kendall Test

M-K Test Value (S)	-313
Critical Value (0.025)	-1.96
Standard Deviation of S	58.39
Standardized Value of S	-5.343
Approximate p-value	4.5669E-8

9.1E-08 = P-value for 2-tailed test (increasing or decreasing)

Statistically significant evidence of a decreasing trend at the specified level of significance.

Mann-Kendall Trend Test Analysis

User Selected Options
Date/Time of Computation ProUCL 5.2 4/10/2023 9:36:21 AM
From File 11206432 PCE Data for ProUCL (for trends)_Updated 4-10-2023.xls
Full Precision OFF
Confidence Coefficient 0.975
Level of Significance 0.025

PCE for Trend (NDs=tied) MW5-15-5&6 (Layer 3)**General Statistics**

Number of Events Reported (m)	31
Number of Missing Events	1
Number of Reported Events Used	30
Number Values Reported (n)	31
Number Values Missing	1
Number Values Used	30
Minimum	0.5
Maximum	5.83
Mean	0.894
Geometric Mean	0.666
Median	0.5
Standard Deviation	1.104
Coefficient of Variation	1.235

Mann-Kendall Test

M-K Test Value (S)	-25
Critical Value (0.025)	-1.96
Standard Deviation of S	48.2
Standardized Value of S	-0.498
Approximate p-value	0.309

0.6 = P-value for 2-tailed test (increasing or decreasing)

Insufficient evidence to identify a significant trend at the specified level of significance.

PCE for Trend (NDs=tied) MW6-16-1 (Layer 3)**General Statistics**

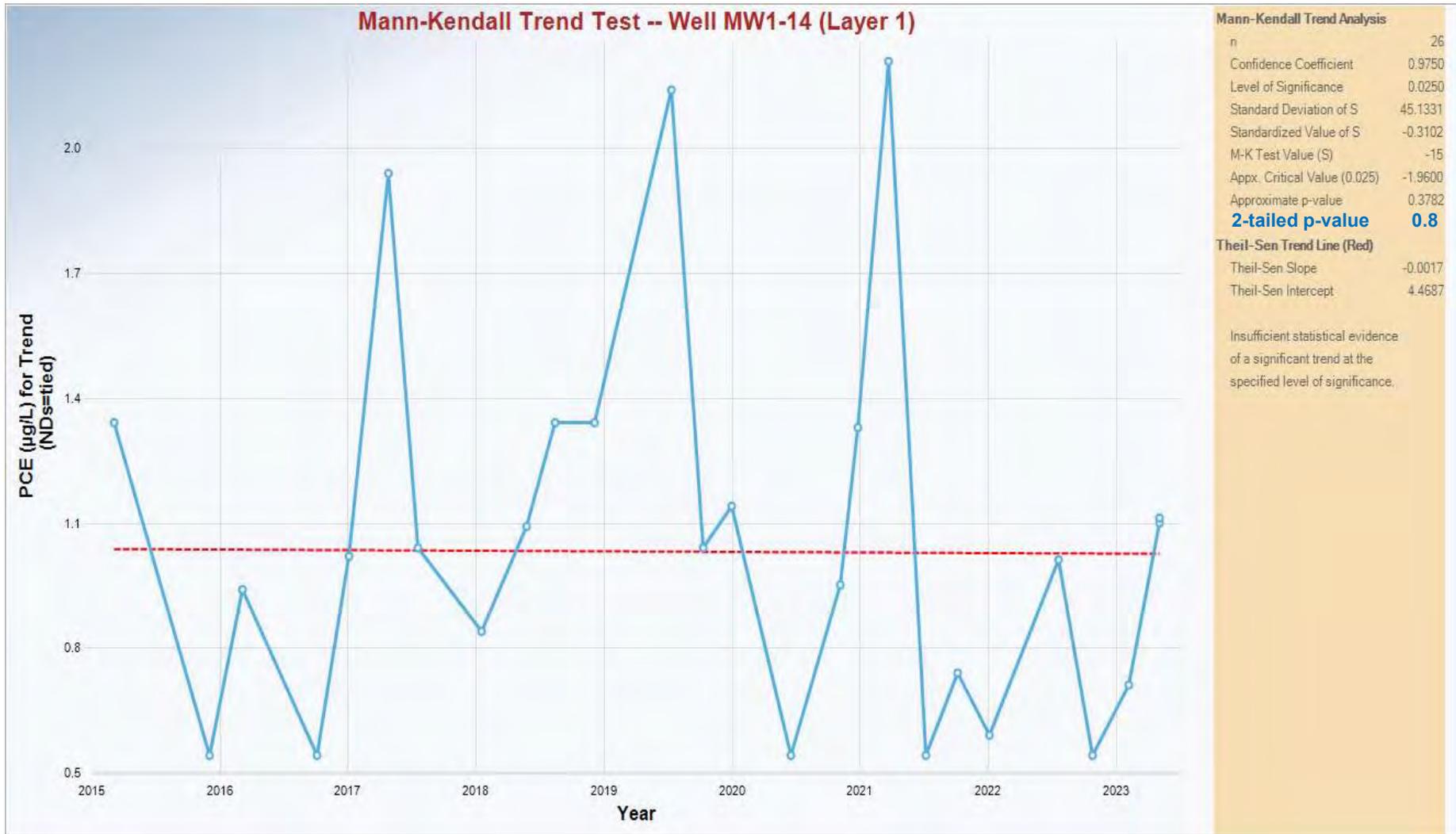
Number of Events Reported (m)	22
Number of Missing Events	2
Number of Reported Events Used	20
Number Values Reported (n)	22
Number Values Missing	2
Number Values Used	20
Minimum	0.5
Maximum	3.8
Mean	1.54
Geometric Mean	1.254
Median	1.5
Standard Deviation	0.98
Coefficient of Variation	0.636

Mann-Kendall Test

M-K Test Value (S)	-99
Tabulated p-value	0.001
Standard Deviation of S	30.28
Standardized Value of S	-3.236
Approximate p-value	6.0557E-4

1.2E-03 = P-value for 2-tailed test (increasing or decreasing)

Statistically significant evidence of a decreasing trend at the specified level of significance.



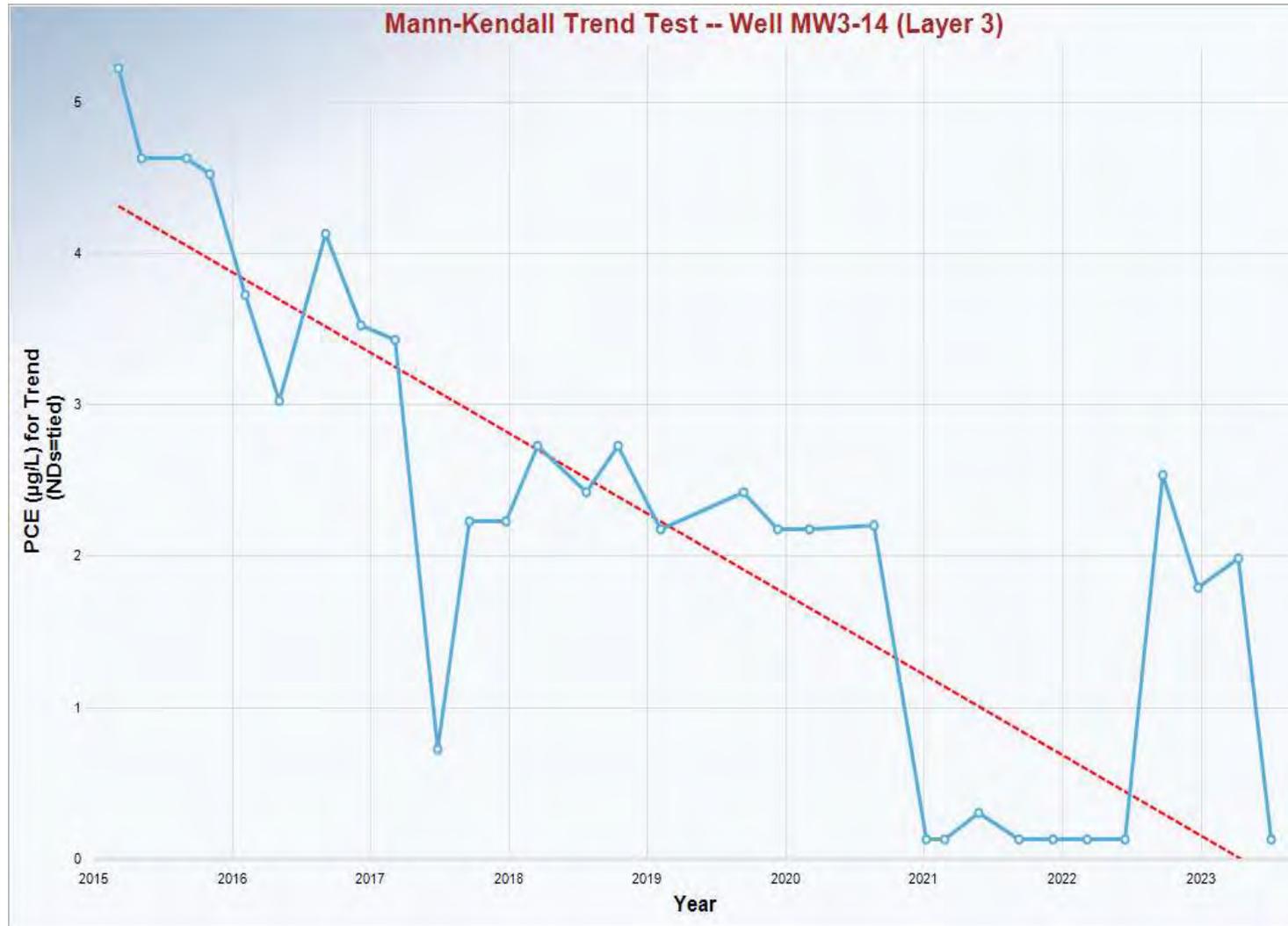
Infrastructure Ontario
Former Millbrook Correctional Centre
Millbrook, Ontario

Project No.: 11206432

Date: 10-Apr-2023

MANN-KENDALL TREND ANALYSIS (ProUCL) WELL MW1-14 (Layer 1)

FIGURE B.1



Mann-Kendall Trend Analysis

n	31
Confidence Coefficient	0.9750
Level of Significance	0.0250
Standard Deviation of S	58.3924
Standardized Value of S	-5.3432
M-K Test Value (S)	-313
Appx. Critical Value (0.025)	-1.9600
Approximate p-value	0.0000
2-tailed p-value	9.1E-08
Theil-Sen Trend Line (Red)	
Theil-Sen Slope	-0.5326
Theil-Sen Intercept	1.077.8056

Statistically significant evidence of a decreasing trend at the specified level of significance.

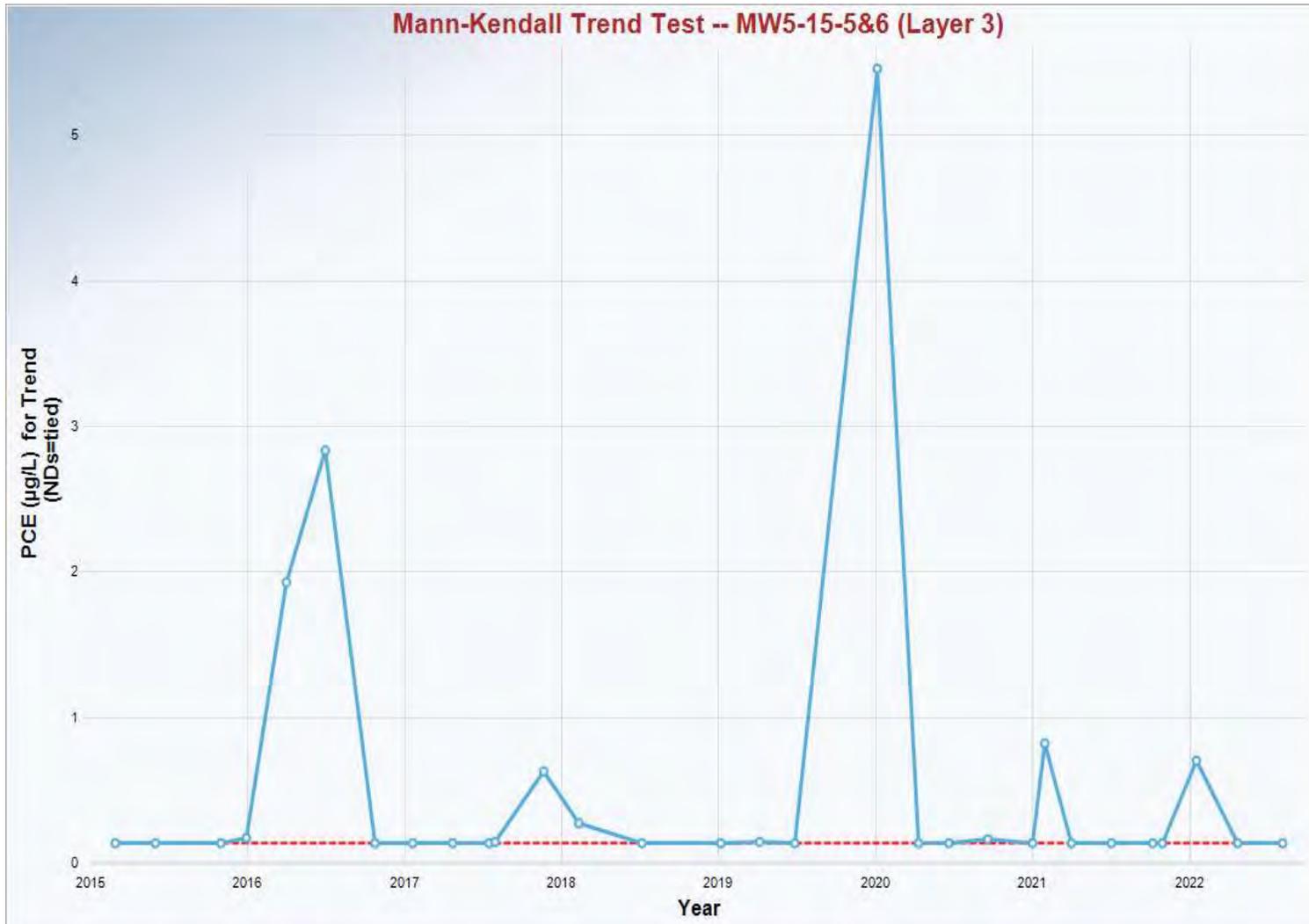


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Millbrook, Ontario

**MANN-KENDALL TREND ANALYSIS (ProUCL)
WELL MW3-14 (Layer 3)**

Project No.: 11206432
Date: 10-Apr-2023

FIGURE B.2



Mann-Kendall Trend Analysis

n	30
Confidence Coefficient	0.9750
Level of Significance	0.0250
Standard Deviation of S	48.2044
Standardized Value of S	-0.4979
M-K Test Value (S)	-25
Appx. Critical Value (0.025)	-1.9600
Approximate p-value	0.3093
2-tailed p-value	0.618
Theil-Sen Trend Line (Red)	
Theil-Sen Slope	0.0000
Theil-Sen Intercept	0.5000

Insufficient statistical evidence of a significant trend at the specified level of significance.

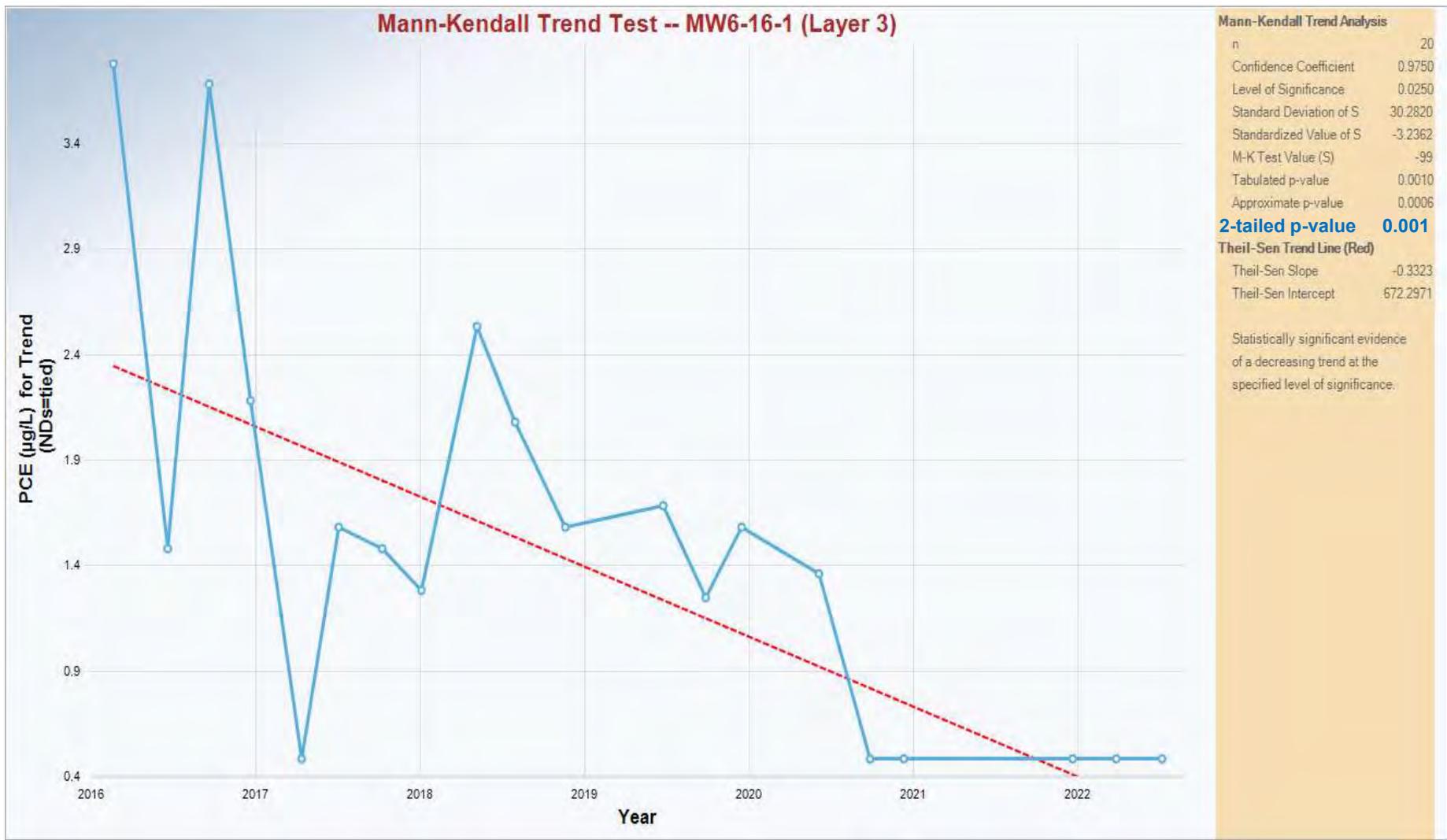


Infrastructure Ontario
 Former Millbrook Correctional Centre
 Millbrook, Ontario

**MANN-KENDALL TREND ANALYSIS (ProUCL)
 WELL MW5-15-5&6 (Layer 3)**

Project No.: 11206432
 Date: 10-Apr-2023

FIGURE B.3



Infrastructure Ontario
Former Millbrook Correctional Centre
Millbrook, Ontario

MANN-KENDALL TREND ANALYSIS (ProUCL) WELL MW6-16-1 (Layer 3)

Project No.: 11206432

Date: 10-Apr-2023

FIGURE B.4



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Canada, K9J 6Z3

Locations

Peterborough
Kingston
Barrie
Oshawa

Laboratory

Peterborough



July 14, 2023

Township of Cavan Monaghan
986 County Road 10,
Millbrook, ON L0A 1G0

Attn: Wayne Hancock, P.Eng.
Director of Public Works

**Re: Peer Review – 2022-2023 Groundwater Monitoring Report, N-00596
Former Millbrook Correctional Centre, 706 County Road 21, Millbrook,
Ontario**

Cambium Reference: 8069-001

Dear Mr. Hancock,

Cambium is pleased to provide the Ministry of Environment, Conservation and Parks (MECP) with a peer review of the report titled “2022-2023 Groundwater Monitoring Report, N-00596 Former Millbrook Correctional Centre, 706 County Road 21, Millbrook, Ontario” prepared by GHD Group Pty Ltd. (GHD) on May 26, 2023.

The Site is approximately 42.8 hectares (105.8 acres) in size and consists of vacant, grass-covered fields and a circular paved road. The Property was formerly occupied by the Millbrook Correctional Center from 1957 until 2003. The facility was formally decommissioned/demolished in 2015. Results from the previous monitoring activities have indicated the presence of tetrachloroethene (PCE) in groundwater, likely related to the historical use of chlorinated solvents at the Site.

A groundwater monitoring program at the Site has been ongoing (to some degree) since at least 2011. The purpose of the program is to monitor for known PCE contamination at the property.

The Millbrook municipal supply well field is located adjacent to the southeastern corner boundary of the Site. Therefore groundwater quality at the Site is closely monitored to determine if there are any potential influences that may develop at the municipal supply well field.



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July 14, 2023

2022-2023 Groundwater Monitoring Report

As part of the 2022-2023 Groundwater Monitoring program completed by GHS, groundwater samples were collected from each on-site monitoring well in May 2022, August, 2022, December 2022, and March 2023 and analyzed for VOCs and compared against criteria outlined in MECP Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Groundwater - All Types of Property Uses - Coarse Texture Soil are applicable (Table 2 SCS). Additionally, water samples were compared against the Ontario Drinking Water Quality Standard (ODWQS) where applicable.

There are 3 main layers identified at the Site: Layer 1 in unconfined sands within an Oak Ridges Moraine unit, Layer 2 identified as the Newmarket Till that acts like a leaky aquitard, and Layer 3 identified and confined inter-till sediments. Monitoring wells are installed within each of the units, and several monitoring wells are Solinst Continuous Multichannel Tubing (“CMT Multilevel Systems™” or “CMT”) wells that draw from each layer.

Groundwater levels were interpreted to flow to the southeast in Layer 1 and south in Layer 3. The municipal supply wells are installed within Layer 3.

PCE concentrations were detected at MW3-14 during three of the four sampling events, which is historically consistent at this location. All of the detections were less than the ODWQS criteria. Mann-Kendall trend tests were conducted at each monitoring well for PCE and it was determined that there was a statistically significant decrease in PCE concentrations at MW3-14 and MW6-16-1 and that concentrations were stable at MW5-15-5&6.

Trichloroethene (TCE) was detected at MW1-14 during the August 2022 sampling event. This parameter was previously not detected and was not detected in the two subsequent monitoring events. Further monitoring is required to confirm TCE concentrations.

GHD concluded that:

Based on the analytical results for the groundwater sampling activities undertaken between 2011 and 2023, there is a decreasing trend in PCE



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July 14, 2023

concentrations. The detected PCE concentrations have been consistently below the ODWQS (10 µg/L). Based on this, it is recommended that the sampling frequency be reduced from quarterly to semi-annually for the upcoming monitoring period.

Cambium's Comments and Recommendations

- Further clarification is sought as to the distance of the Millbrook municipal supply well field to the nearby southern boundary of the Site. Section 2.1 of the report states that the municipal wells are 25 m from the boundary, whereas Section 2.2 that the well field is approximately 100 m from the boundary. Please confirm the distance between the closest Site boundary and the Millbrook municipal supply well field.
- Upon reviewing Table 3, which was provided appended to the report, Cambium does note that field turbidity readings were very high (1,000 NTU +) for many sampling events and at various monitoring wells. The turbidity also fluctuated significantly between sampling events at many wells. A discussion of the turbidity results should be provided.
- It is noted note that the concentration of trichloromethane (chloroform) was detected and exceeded Table 2 criteria at MW17 (Layer 3) during the May 2022 sampling event. This exceedance was not discussed within the 2022/2023 groundwater report.
- Chloroform exceedances were reported from multiple monitoring well locations over the course of the monitoring program. However, chloroform was not discussed in the report as a potential contaminant.
- Cambium agrees that ongoing monitoring is required to determine whether the exceedance of TCE at MW1-14 was anomalous.
- PCE is the main contaminant of concern for the municipal supply wells and it has been demonstrated that concentrations of this parameter are decreasing in some wells as per the Mann-Kendall trend tests. However, due to the recent TCE detection at well MW1-14, Cambium cannot support the proposed monitoring program reduction. The monitoring



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 Professional Engineers
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APGO

July 14, 2023

program should continue as normal (quarterly sampling) for one more year to confirm the presence or absence of TCE. After which proposed reductions can be considered.

Closing

We trust that the information in this letter meets your current requirements. If you have any questions regarding the contents of this peer review, please contact the undersigned.

Best regards,

Cambium Inc.



Nicole Heikoop, M.Sc., GIT
Project Coordinator

NH/cm



Cameron MacDougall, P. Geo.
Project Manager

P:\8000 to 8099\8069-001 Twp of Cavan-Monaghan - Millbrook Water and Wastewater Monitoring\Deliverables\2023 IO\2023-06-08 Peer Review, 2022-2023 GW Monitoring.docx



July 14, 2023

CAMBIUM QUALIFICATIONS AND LIMITATIONS

Limited Warranty

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

Reliance on Materials and Information

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Oshawa

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Regular Council Meeting

To:	Mayor and Council
Date:	December 18, 2023
From:	Wayne Hancock, Director of Public Works Drew Hutchison, Public Works Engineering Technician
Report Number:	Public Works 2023-27
Subject:	Recommended Updates to Traffic and Parking By-law No. 2022-65

Recommendations:

1. That Council approve the speed limit reduction requests of Wilson Line reducing the speed limit from 80 km/hr to 60 km/hr between 1100m west of County Road 10 to the westerly limit; and
2. That Council receive the speed limit reduction requests for Larmer Line, between County Road 28 and County Road 10, and Cedar Valley Road, between County Road 28 and Hutchison Drive, as information as staff continue to monitor traffic data in these locations; and
3. That Council approve the updated Traffic and Parking By-law No. 2023-62 being a by-law to regulate traffic and parking within the limits of the Township of Cavan Monaghan and repeal the previous Traffic and Parking By-law No. 2022-65 in its entirety.

Overview:

Staff brought Public Works Report 2023-20 Recommended Updates to Traffic and Parking By-law No. 2022-65 to Council on September 18th, 2023. Staff report to Council on a yearly basis regarding the Traffic and Parking By-law in order to update and incorporate proposed changes to the By-law as requested by residents, Council and Staff.

During the September 18th, 2023 Council meeting, Council motioned to defer Public Works report 2023-20 until a later date to allow Township staff time to work in conjunction with the City of Kawartha Lakes while considering speed limit regulations on Hayes Line.

A petition was submitted to the City of Kawartha Lakes and circulated to Council at their last Council meeting. Township staff are awaiting a response from the City of Kawartha Lakes. Staff will include recommendations for Hayes Line in the 2024 Traffic and Parking By-law update in 2024.

A summary of potential updates to the Parking and Traffic By-law at this time are as follows:

1. To lower the speed limit of Wilson Line from 80 km/h to 60 km/h from 1100m west of County Road 10 to the westerly limit.

Financial Impact:

Funding for installation of new signage is included in the operating budget under Road Safety Devices and Signs.

Attachments:

1. Public Works Report 2023-20
2. Present Traffic & Parking By-law No. 2022-65
3. Map locations of speed limit reduction requests
4. Speed Study Data Results
5. Updated Parking and Traffic By-law No. 2023-62

Respectfully Submitted by,

Reviewed by,

Wayne Hancock
Director of Public Works

Yvette Hurley
Chief Administrative Officer

Drew Hutchison
Public Works Engineering Technician



Regular Council Meeting

Table with 2 columns: Field (To, Date, From, Report Number, Subject) and Value (Mayor and Council, September 18, 2023, Wayne Hancock, Director of Public Works, Public Works 2023-20, Recommended Updates to Traffic and Parking By-law No. 2022-65)

Recommendations:

- 1. That Council approve the speed limit reduction requests of Wilson Line...
2. That Council receive the speed limit reduction requests for Larmer Line...
3. That Council approve the updated Traffic and Parking By-law No. 2023-62...

Overview:

Staff report to Council on a yearly basis regarding the Traffic and Parking By-law in order to update and incorporate proposed changes to the by-law as requested by residents, Council and staff.

Following Public Works Report 2022-20 in 2022 and into 2023, staff have received requests in the form of emails/correspondence from residents concerned with speed limits in three locations within the Township.

speed sign and road tube counters (ATR) to gather speed and volume counts on the requested locations.

Requests for speed limit reduction have been received for locations including Wilson Line, Cedar Valley Road, and Larmer Line from County Road 28 to County Road 10. Resident concerns have varied from speeding cars; safety hazards along the roadways; the safety of their children playing near the road; pedestrians walking on the shoulder of the road; and more cyclists using the roads. All of the requested roads are school routes. Attachment No. 2 shows the sections of roadways where requests have been received.

In reviewing these requests for speed limit changes, staff conducted 5-day traffic speed studies for each of the locations. The data collected during the study has been prepared for Council to review (Attachment No. 3).

In addition, staff have prepared the following table, which provides the year of the request; the road section where the speed limit request was made; the current speed limit, the requested speed limit change; and data from the traffic counts. These are summarized as follows:

YEAR REQUESTED	ROAD	ROAD SECTION	CURRENT SPEED (km/h)	REQUESTED SPEED (km/h)	TOTAL VEHICLE COUNT	AVERAGE SPEED (km/h)
2022 & 2023	WILSON LN	between County Rd 10 and Westerly Limit	80	60	706	55
2023	LARMER LN	between County Rd 10 and Hwy 28	80	60	1375	67
2023	CEDAR VALLEY ROAD	between Hwy 28 and Hutchison Dr	50	40	1091	60

Staff have contacted the Peterborough Police to comment on any concerns in the requested locations, at this time they do not have data to support the concerns of speeding in these locations.

Staff are recommending that Council approve the speed limit reduction on Wilson Line. Attachment No. 4 is the updated by-law Parking and Traffic By-law 2023-62 which would include the following changes should Council approve the recommendations to this report.

A summary of potential updates to the Parking and Traffic By-law are as follows:

Township of Cavan Monaghan

By-law No. 2022-65

Being a by-law to regulate traffic and parking within the limits of the Township of Cavan Monaghan.

Whereas the Municipality has the authority to pass by-laws to regulate the foregoing, pursuant to the Municipal Act, 2001;

Now Therefore, the Council of the Township of Cavan Monaghan hereby enacts as follows:

1. Definitions

For the purpose of this By-law:

"Bicycle" includes tricycles and unicycles but does not include a motor assisted bicycle.

"Boulevard" means the portion of the road allowance lying between the sidewalk and the roadway. On roads where there are no sidewalks it shall mean the portion of the road allowance lying between the travelled portion of the road and the limit of the road allowance.

"Bridge" means any bridge spanning a water course or ravine.

"Commercial Vehicle" means a motor vehicle having permanently attached thereto a truck or delivery body and includes ambulances, hearses, casket wagons, fire apparatus, police patrols, motor buses and tractors. A van that is used for commercial purposes is to be considered a commercial vehicle.

"Gross Weight" means the combined weight of the vehicle and the load.

"Heavy Vehicle" means a vehicle, object or contrivance for moving loads having a registered gross weight, including the vehicle, object or contrivance and load, greater than two thousand, two hundred and sixty seven decimal nine six (2,267.96) kilograms, but does not include a passenger vehicle, ambulance, public works vehicle, fire department vehicle, police vehicle or a privately owned commercial vehicle which is being driven to or from the residence by the owner or other family member, or a commercial motor vehicle making a delivery to or collecting from a bonafide destination, which cannot be reached by way of a highway or highways upon which heavy traffic is not prohibited by this By-law.

"Highway" includes a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, designed and intended for, or

used by, the general public for the passage of vehicles.

“Intersection” means the area embraced within the prolongation or connection of the lateral curb lines, or, if none, that lateral boundary lines of two or more highways that join one another at an angle, whether or not one highway crosses the other.

“Minister” means the Minister of Transportation.

“Park or Parking” when prohibited, means the standing of a vehicle, whether occupied or not, except when standing temporarily for the purpose of and while actually engaged in, loading or unloading merchandise and passengers.

“Pedestrians” means persons afoot, persons in wheelchairs and children in wheeled carriages, sleds and wagons.

“Police Officer or Officer” means a member of the Ontario Provincial Police Force, Peterborough Polices Services or a Municipal Law Enforcement Officer authorized to enforce the provisions of this By-law, and designated as a Provincial Offences Officer and includes all other persons appointed as Provincial Offences Officers.

“Restricted Parking Area” means any of the locations named or described in Schedules “B”, “C”, and “D” attached to and forming part of this By-law.

“Roadway” means that part of the highway which is improved, designated or ordinarily used for vehicular traffic, but does not include the shoulder, and, where a highway includes two or more separate roadways, the term “Roadway” refers to any one roadway separately but not to all roadways collectively.

“Sidewalk” means any sidewalk, pathway, footpath or other area forming part of any highway or bridge or boulevard, or other means of walkways used by, or set apart for, the use of pedestrians.

“Stand or Standing” when prohibited, means the halting of a motor vehicle, whether occupied or not, except when necessary to avoid conflict with other traffic or in compliance with the direction of a police officer, a traffic control sign or traffic control signal.

“Stop or Stopping” when prohibited, means the halting of a vehicle, even momentarily whether occupied or not, except when necessary to avoid conflict with other traffic or in compliance with the directions of a constable or other police officer, or of a traffic control sign or signals.

“Street” includes a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, designed and intended for, or

used by, the general public for the passage of vehicles.

"Time" where an expression of time occurs or where any hour or other period of time is stated, the time referred to shall be Eastern Standard Time, except in periods when Daylight Saving Time is in effect, such time shall be Eastern Daylight Saving Time.

"Traffic" includes pedestrians, ridden or herded animals, vehicles, buses and other conveyances, either singularly or together using any street for purposes of travel.

"Traffic Control Device" means any sign, roadway, curb or sidewalk marking, or other device erected or placed under the authority of the Municipal Council for the purpose of guiding or directing traffic.

"Vehicle" includes a bicycle, a motorcycle, motor vehicle trailer, traction engine, farm tractor, road building machine and any vehicle propelled or driven by any kind of power, including muscular power, but does not include a motorized snow vehicle or the cars of electric or steam railways running only upon rails.

Part I – Traffic

Enforcement	1.1	The provisions of this By-law may be enforced by an Ontario Provincial Police Officer, Peterborough Police Services or a Provincial Offences Officer or any persons authorized to enforce the By-law.
Stop Signs	1.2	The intersections on highways, or parts of Highways, within the Township of Cavan Monaghan, as described in Schedule "E", attached to and forming part of this By-law, shall be designated as "Stop" intersections
Excavation & Barricade	1.3	No person or persons shall open excavations, erect barricades, store earth or construction materials, or park work equipment on any portion of any highway without first obtaining approval from the Township of Cavan Monaghan Director of Public Works, or his/her designate. Such approval shall be registered with the Clerk of the Township of Cavan Monaghan.
Placement Material on Township Property	1.4	No person shall place snow, stones, soil, rubbish or materials of any kind from

private property upon the highways, boulevards or sidewalks of the Township of Cavan Monaghan.

- | | | |
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| Remove/Injure Traffic Signs | 1.5 | No person or persons shall, without lawful authority, attempt to or, in fact, alter, deface, injure, break down or remove any official traffic control device or any inscription, shield or insignia thereon, or part thereof. |
| Heavy Vehicles Prohibited | 1.6 | When properly worded signs have been erected and are on display, no person shall drive, move or otherwise operate "Heavy Vehicles" upon any highway or part of a highway named or described in Schedule "J", attached to and forming part of this By-law. |
| Load Restrictions | 1.7 | When properly worded signs have been erected and are on display, no person shall operate a vehicle on a highway or part of a highway if any axle of the commercial vehicle or its trailer transmits to the highway a weight in excess of 5 tonnes (5000 kg.) between March 1 and April 30. |
| Bicycle Riders to Ride on Right | 1.8 | A person riding a bicycle on a roadway shall ride as near to the right hand side of the roadway as is practicable and shall exercise due care when passing a standing vehicle or one proceeding in the same direction. |
| Motorized Snow Vehicles after 11:00 p.m. | 1.9 | (a) No person shall drive a motorized snow vehicle upon any highway within the Township of Cavan Monaghan between the hours of 11:01 p.m. and 7:00 a.m.

(b) Section (a) does not apply to a person or persons driving a motorized snow vehicle who is proceeding directly to the residence of the registered owner of the motorized snow vehicle or directly to a place of employment or by emergency services for emergency purposes. |
| Maximum 15 KMH | 1.10 | When properly worded Speed Limit signs have been erected and are on display, no |

person shall drive a motor vehicle at a rate of speed greater than 15 kilometres per hour on any highway or parts of a highway described in Schedule "F", attached to and forming part of this By-law.

Maximum 40 KMH 1.11 When properly worded Speed Limit signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 40 kilometres per hour on any highway or parts of a highway described in Schedule "G", attached to and forming part of this By-law.

Maximum 50 KMH 1.12 When properly worded Speed Limit signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 50 kilometres per hour on any highway or parts of a highway described in Schedule "H", attached to and forming part of this By-law.

Maximum 60 KMH 1.13 When properly worded Speed Limit signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 60 kilometres per hour on any highway or parts of a highway described in Schedule "I" attached to and forming part of this By-law.

Part II – Parking

Parking Restricted 2.1 When properly worded signs have been erected and are on display, no person shall park a vehicle on any highway between the limits and periods of time as described in Schedule "A" attached to and forming part of this By-law.

(a) When properly worded signs have been erected and are on display, between the hours of 9:00 a.m. and 6:00 p.m., from Monday to Saturday inclusive, no person shall park a vehicle for any one period of time in excess of fifteen (15) minutes on those parts of streets named or described in Schedule "C".

(b) When properly worded signs have been erected and are on display at all entrances to the Millbrook Ward, no person shall park a vehicle on any street between the hours of 2:00 a.m. and 7:00 a.m. of the same day from November 15 of one year and April 1 of the following year.

(c) When properly worded signs have been erected and are on display, between the hour of 9:00 a.m. and 6:00 p.m., from Monday to Saturday inclusive, no person shall park a vehicle for any one period of time in excess of two (2) hours on those streets or parts of streets named or described in Schedule "D" of this By-law.

(d) When properly worded signs have been erected and are on display, no person shall park on a vehicle on the street except as permitted by Schedule "K".

Parking Prohibited

2.2 When properly worded signs have been erected and are on display, no person shall, at any time, park a vehicle in the following places within the Township of Cavan Monaghan:

In any area described in Schedule "B", Schedule "C", and Schedule "D", attached to and forming part of this By-law.

No Parking General

2.3 No person, within the Township of Cavan Monaghan, shall park a vehicle in any of the following places;

(a) In front of a public or private driveway;

(b) Within nine (9) metres of an intersection;

(c) Within three (3) metres of a Fire Hydrant;

(d) On any highway between the hours of 12:01 a.m. and 7:00 a.m.;

(e) On any Highway in such a manner as to

obstruct or impede the removal of snow from the highway;

(f) Within any cul-de-sac area;

(g) No person shall park or stop a vehicle that obstructs a sidewalk or walkways, or obstruct the sodded boulevard beside the driveway approach between the sidewalk and curb line.

Stopping Prohibited

2.4 No person shall stop a vehicle in any of the following places:

(a) In front of the entrance to a public lane or a private driveway or so as to prevent entry to or exit from such public land or private driveway;

(b) Within three (3) metres of a Fire Hydrant;

(c) On any highway in such a manner as to obstruct or impede the removal of snow from the highway;

(d) On any highway in such a manner as to prevent the convenient removal of another vehicle previously parked or standing;

(e) On the highway side of any vehicle previously parked or standing;

(f) Alongside or across from any obstruction or excavation in such a manner as to obstruct, impede or otherwise restrict the normal flow of traffic;

(g) Opposite another vehicle, parked or standing, on any highway wherein said highway is less than eleven (11) metres in width;

(h) On any highway as described in Schedule "A", attached to and forming part of this By-law.

Penalties

2.5 Any person violating any of the provisions of

this By-law is liable to the penalty as prescribed by the applicable law for each offence.

Where a vehicle is found parked in contravention of the provisions contained in Part II of this By-law, an Ontario Provincial Police, Peterborough Police Services or a Provincial Offences Officer or a Municipal Law Enforcement Officer authorized to enforce the By-law finding the vehicle may have the vehicle towed away at the expense of the owner.

- | | | |
|------------------|-----|---|
| By-laws Repealed | 2.6 | That all previous traffic By-laws are hereby repealed in their entirety. |
| Effective Date | 2.7 | This By-law shall come into force and take effect upon final passage by the Township of Cavan Monaghan and when signs have been erected and are on display in compliance with the regulations of the Ministry of Transportation |

That By-Law 2019-25 be repealed in its entirety.

Read a first, second and third time and passed this 3rd day of October, 2022.



Scott McFadden
Mayor



Cindy Page
Clerk

Schedule "A"

No Stopping

When properly worded signs have been erected and are on display, no person shall park a vehicle on any of the highways or parts of highways hereinafter set out:

Anne Street	North Side – from Hay Street to Cavan Street East Side – from Cavan Street to Frederick Street
Centre Street	North Side – from Union Street to a point 35 metres east of Union Street South Side – from Union Street to west limits of Centre Street
Distillery Street	West Side
Duke Street	East Side – from King Street east to a point 58 metres south of King Street East
Needler's Lane	North Side – from Allan Lane to Hay Street South Side - from Baxter Creek to a point 15 metres west of Baxter Creek
Frederick Street	South Side – from Anne Street to Main Street
Hay Street	West Side – entire side of street to Anne Street East Side – from a point 50 metres south of King Street East to Needler's Lane
Huston Street	West Side – from King Street West to south limits of Huston Street
Lisa Court	Both Sides – within circle at south end of Lisa Court
Main Street	East Side – from a point 69 metres south of King Street East to Charles Street East Side – from Marshall Street to a point 67 metres north of Frederick Street East Side – from Frederick Street to the south limits of Main Street West Side – from a point 48 metres south of King Street East to a point 35 metres south of Charles Street West Side – from a point 45 metres south of Marshall Street to a point 30 metres north of Frederick Street

Needler's Lane	East Side – from a point 27 metres south of Distillery Street to a point 66 metres south of Distillery Street West Side – from Distillery Street to a point 69 metres south of Distillery Street
Queen Street	West Side – from King Street West to the north limits of Queen Street
Union Street	West Side – from Centre Street to a point 50 metres south of Centre Street

Schedule "B"

Restricted Parking

Unless otherwise properly signed, no person shall park a vehicle on any highway for longer than four (4) hours or in such a manner as to impede snow removal.

Schedule "C"

Restricted Parking

When properly worded signs have been erected and are on display, no person shall park a vehicle on a highway or parts of highways hereinafter set out in excess of fifteen (15) minutes:

Union Street West Side – From a point 9 metres north of King Street West to a point 19 metres north of King Street West

Schedule "D"

Restricted Parking

When properly worded signs have been erected and are on display, no person shall park a vehicle on a highway or parts of highways hereinafter set out in excess of two (2) hours:

Hay Street	East Side – Between King Street East to a point 50 metres south of King Street East
Distillery Street	West Side – Between King Street East and Needler's Lane East Side – Between King Street East and the north abutment of Baxter Creek Bridge
Centre Street	South Side – Between Tupper Street and Union Street North Side – Between Tupper Street and a point 35 metres east of Union Street
Union Street	East Side – Between King Street West and Centre Street West Side – Between a point 19 metres north of King Street West and a point 50 metres south of Centre Street

Schedule "E"

Providing for the Erection of Stop Signs at Intersections

The intersections on highways set out in Column 1 are designated as intersections where Stop signs shall be erected at the locations shown in Column 2.

Column 1: Intersection

McCamus ¼ Line at Eagleson Line
McCamus ¼ Line at Carmel Line
Brackenridge Dr. at Carmel Line
Brackenridge Dr. at Deyell Line
T-Way Dr. at Deyell Line
Thorne Dr. at Deyell Line
Thorne Dr. at Zion Line
Bee Dr. at Deyell Line
Ava Cr. at Deyell Line
Carveth Dr. at Zion Line
Elgar Dr. at Zion Line
Elgar Ct. at Elgar Dr.
White Birch Rd. at Elgar Dr.
Birch Rd. at White Birch Rd.
Zion Line at Glamorgan Rd.
Hutchison Dr. at Zion Line
Hutchison Dr. at Cedar Valley Rd.
Hutchison Dr. at Cedar Cr.
Hutchison Dr. at Larmer Line
Hutchison Dr. at Syer Line
Glamorgan Rd. at Fallis Line
Fallis Line at Tapley ¼ Line
Valleyview Drive at Fallis Line west side
Valleyview Drive at Fallis Line east side
Morningside Place at Valleyview Drive
Scout Cr. at Tapley ¼ Line
Tapley ¼ Line at Valley Rd.
Deer Ave. at Valley Rd.
Acadia Ct. at Valley Rd.
Pine Tree Cr. at Valley Rd.
Maple Tree Cr. at Pine Tree Cr.
Plains Circle at Deer Ave
Plains Circle at Plains Circle
Larmer Line at Tapley ¼ Line
Deer Ave. at Larmer Line
Valley Rd. at Larmer Line
Vista Cr. at Syer Line

Column 2: Facing Traffic

Southbound on McCamus ¼ Line
Northbound on McCamus ¼ Line
Southbound on Brackenridge Dr.
Northbound on Brackenridge Dr.
Northbound on T-Way Dr.
Southbound on Thorne Dr.
Northbound on Thorne Dr.
Northbound on Bee Dr.
Southbound on Ava Cr.
Southbound on Carveth Dr.
Northbound on Elgar Dr.
Westbound on Elgar Ct.
Westbound on White Birch Rd. White
Eastbound on White Birch Rd.
Westbound on Zion Line
North and Southbound on Hutchison Dr.
Westbound on Cedar Valley Rd.
Eastbound on Cedar Cr.
North and Southbound on Hutchison Dr.
Northbound on Hutchison Dr.
Northbound on Glamorgan Rd.
East and Westbound on Fallis Line
Southbound on Valleyview
Southbound on Valleyview
Southbound on Morningside
Westbound on Scout Cr.
Westbound on Valley Rd.
Southbound on Deer Ave.
Northbound on Acadia Ct.
Eastbound on Pine Tree Cr.
Northbound on Maple Tree Cr.
Eastbound on Plains Circle
Southbound on Plains Circle
Westbound on Larmer Line
Northbound on Deer Ave.
Northbound on Valley Rd.
Southbound on Vista Cr.

Syer Line at Tapley ¼ Line
Highview Cr. at Syer Line
Dranoel Rd. at Syer Line
Dranoel Dr. at Dranoel Rd.
Ford Cr. at Ford Dr.
Moore Dr. at Moore Dr.
Morton Line at Dranoel Rd.
Tapley ¼ Line at Morton Line
Sharpe Line at Dranoel Rd.
Jack Lane at Sharpe Line
Sharpe Line at Winslow ¼ Line
Cora Drive at Sharpe Line
Howden ¼ Line at Sharpe Line

Cathcart Cr. at Stewart Line
Preston Rd. at Stewart Line
Howden ¼ Line at Stewart Line

Winslow ¼ Line at Stewart Line

Darling Cr. at Stewart Line
Darling Cr. at Darling Cr.
Jill Lane at Stewart Line
Howden ¼ Line at Hooton Dr.

Hooton Dr. at Hooton Dr.
Fieldview Dr. at Hooton Dr.
Hooton Dr. at Preston Rd.
Best Rd. at Hayes Line
Jones ¼ Line at Bland Line
Shields Dr. at Bland Line
Hayes Line at Jones ¼ Line
Albert St. at Bland Line
High St. at Mt. Pleasant Rd.
Albert St. at Mt. Pleasant Rd.
Meadow Lane at Workman St.
Rose Cr. at Kennedy Dr.
Ashley Cr. at Cathcart Cr.
Brewda Cres. at Kalman Drive
Kalman Drive at Carmel Line
Dufferin Street at Gravel Road
Needler's Lane and Distillery St.
Needler's Lane and Allen Lane
Hay Street and Needler's Lane
Prince Street at Anne Street
Princess Street at Anne Street

East and Westbound on Syer Line
Southbound on Highview Cr.
Westbound on Syer Line
Westbound on Dranoel Dr.
Eastbound on Ford Cr.
Eastbound on Moore Dr.
Westbound on Morton Line
Northbound on Tapley ¼ Line
Westbound on Sharpe Line
Southbound on Jack Lane
Westbound on Sharpe Line
Northbound on Cora Dr.
North and Southbound on Howden ¼
Line
Northbound on Cathcart Cr.
Southbound on Preston Rd.
North and Southbound on Howden ¼
Line
North and Southbound on Winslow ¼
Line
Northbound on Darling Cr.
Southbound on Darling Cr.
Northbound on Jill Lane
North and Southbound on Howden ¼
Line
Westbound on Hooton Dr.
Northbound on Fieldview Dr.
Eastbound on Hooton Dr.
Northbound on Best Rd.
Southbound on Jones ¼ Line
Northbound on Shields Dr.
Northbound on Jones ¼ Line
Northbound on Albert St.
North and Southbound on High St.
Southbound on Albert St.
Westbound on Meadow Lane
Westbound on Rose Cr.
Eastbound on Ashley Cr.
Westbound on Brewda Cres.
Northbound on Kalman Drive
Eastbound on Dufferin Street
Northbound on Needler's Lane
Southbound on Allen Lane
Westbound on Needler's Lane
Northbound on Prince Street
Northbound on Princess Street

Cavan Street at Anne Street
Anne Street at Frederick Street
Frederick Street at Anne Street
Frederick Street at Main Street
Frederick Street at Main Street
Marshall St. at Main Street
Charles Street at Main St.
Charles Street at Main St.
Sowden Lane at Main St.
Union St. at Centre Street
Union St. at Manor Drive
Baxter Creek Ct. at Brookside St.
Burnham Ct. at McGuire Dr.
Wing St. at Bank St. South
Century Blvd. at Centennial Lane
Century Blvd. at Nina Court
Bartlett Rd. at Whitfield Rd.
Maplehill Court at Maplehill Drive
Avenue at Longview Drive
Filman Crescent at Longview Drive
Campbell Avenue at Campbell Avenue
Whittington Drive at Dobbin Road
Whittington Drive at Elmdale Road
Davis Road at Stewart Line
Davis Road at Maple Grove Road
Grove Road at Preston Road
Elmdale Road at Brown Line
Brown Line at Elmdale Road
Worboy Ct. at Beardsmore Road
Carolyn Street at Johnston Dr.
Skiview Dr. at Hillview Dr.

Eastbound on Cavan Street
Southbound on Anne Street
Eastbound on Frederick Street
Westbound on Frederick Street
Eastbound on Frederick Street
East and Westbound on Marshall St.
Westbound on Charles Street
Eastbound on Charles Street
Westbound on Sowden Lane
North and Southbound on Union St.
All (4) Way Stop
Northbound on Baxter Creek Ct.
Southbound on Burnham Ct.
Westbound on Wing St.
Southbound on Century Blvd.
Northbound on Century Blvd.
Southbound on Bartlett Rd
Eastbound on Maplehill Court Campbell
East & Westbound on Campbell Ave
Eastbound on Filman Crescent
Southbound on Campbell Ave
East & Westbound on Whittington Drive
East & Westbound on Whittington Drive
Southbound on Davis Road
Northbound on Davis Road Maple
Westbound on Maple Grove Road
Southbound on Elmdale Road
East & Westbound on Brown Line
Eastbound on Worboy Ct.
Northbound on Carolyn Street
Westbound on Skiview Dr.

Schedule "F"

15 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 15 kilometres per hour as hereinafter set out:

Highway	From	To
Mervin Line	Airport Road	End

Schedule "G"

40 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 40 kilometres per hour as hereinafter set out:

Highway	From	To
Ford Drive	Highway 7A	End
Ford Crescent	Highway 7A	Ford Drive
Highview Crescent	Syer Line	End
Carveth Drive	Zion Line	Huston

Schedule "H"

50 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 50 kilometres per hour as hereinafter set out:

Highway	From	To
Carmel Line	County Rd. 28	1150 meters westerly
Edgewood Park Drive	Mount Pleasant Road	End
Preston Road	Maple Grove Road	Stewart Line
Hooton Drive	Preston Road	650 meters westerly
Larmer Line	Tapley ¼ Line	1300 metres easterly
Tapley ¼ Line	Fallis Line	Syer Line
Cedar Valley Road	Hutchison Drive	County Rd. 28
Hutchison Drive	100 metres north of Cedar Valley Road	700 metres southerly
Morton Line	Highway 7	500 metres westerly
Sharpe Line	County Rd. 10	1200 metres easterly
Sharpe Line	County Rd. 10	700 metres westerly
Scout Crescent	Tapley ¼ Line	End
Plains Circle	Deer Avenue	End
Pine Tree Crescent	Valley Rd.	End
Maple Tree Crescent	Pine Tree Crescent	End
Valley Road	Tapley ¼ Line	Larmer Line
Acadia Court	Valley Road	End
Valleyview Drive	Fallis Line	Fallis Line
Morningside Place	Valleyview Drive	End
White Birch Road	Elgar Drive	End
Kennedy Drive	Mount Pleasant Road	End
Rose Crescent	Kennedy Drive	End
Workman Street	Mount Pleasant Road	Mill Street
Meadow Lane	Workman Street	End
High Street	Mill Street	End
Mill Street	Workman Street	High Street
Albert Street	Mount Pleasant Road	Bland Line
Rothsay Avenue	Lansdowne Street	End
Ashley Cres.	Cathcart Cres.	End
Syer Line	County Rd. 10	100 metres west of the Municipal address 888 Syer Line
Clifford Line	Highway 7	End
Dobbin Road	Whittington Drive	1.2 km to city limits
Whittington Drive	Rosemount Gardens	3.2 Easterly
Davis Road	Stewart Line	Maple Grove Road

Elmdale Road
 Brown Line
 Beardsmore Road
 Johnston Drive
 Whitfield Road
 Bartlett Road
 Longview Drive
 Campbell Avenue
 Campbell Avenue
 Filman Crescent
 Carolyn Street
 Worboy Court
 Brown Line
 Maplehill Drive
 Maplehill Court
 Deer Avenue
 Elgar Court
 Kalman Drive
 Brewda Court
 Skiview Drive
 Miller Street
 King George Street
 Elizabeth Street
 Poplar Plains Drive
 Cavan Woods Drive
 Fallingbrook Drive
 Mount Pleasant Road
 Blue Jay Street
 Alexander Drive
 Jill Lane
 Fieldview Drive
 Huston Street
 Sunset Drive
 Fallis Line

North Monaghan
 Hwy 7
 Airport Road
 Worboy Court
 County Road 28
 Moncrief Line
 Sherbrooke St. W.
 Longview Drive
 Longview Drive
 Longview Drive
 Beardsmore Road
 Beardsmore Road
 Airport Road
 Sherbrooke Street
 Maplehill Drive
 Larmer Line
 Elgar Drive
 Carmel Line
 Kalman Drive
 Hillview Drive
 County Road 10
 County Road 10
 Miller Street
 County Road 10
 County Road 10
 Poplar Plains Drive
 Queen Mary Street
 Queen Mary Street
 Blue Jay Street
 Stewart Line
 Hooton Drive
 Millbrook Ward limits
 Highway 7A
 County Road 10

Brown Line
 Airport Road
 Worboy Court
 City Limits
 End
 Whitfield Road
 End
 East end
 Campbell Avenue
 Longview Drive
 End
 End
 East end
 End
 End
 Valley Road
 End
 End
 End
 End
 End
 Elizabeth Street
 King George St.
 Fallingbrook Drive
 Fallingbrook Drive
 Cavan Woods
 High Street
 Alexander Drive
 End
 End
 End
 Carveth Drive
 End
 Tapley ¼ Line

All Highways within the Millbrook Settlement Area.

Schedule "I"

60 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 60 kilometres per hour as hereinafter set out:

Highway	From	To
Stewart Line	County Rd. 10	Preston Road
Stewart Line	County Rd. 10	Dranoel Road
Wilson Line	1100 metres west of County Rd. 10	800 metres westerly
Darling Crescent	Stewart Line	End
Jack Lane	Sharpe Line	End
Vista Crescent	Syer Line	End
Elgar Drive	Zion Line	End
Bee Drive	Deyell Line	End
Ava Crescent	Deyell Line	End
T-Way Drive	Deyell Line	End
Carmel Crescent	County Rd. 10	End
Zion Line	County Rd. 28	County Road 10
Sharpe Line	Highway 7	Howden ¼ Line
Cathcart Crescent	Stewart Line	Highway 7
Deyell Line	County Road 10	Hutchison Drive
Bland Line	County Road 10	Westerly limit
Jones ¼ Line	Bland Line	300 metres northerly
Syer Line	Tapley ¼ Line	100 metres west of the Municipal address 888 Syer Line
Carmel Line	County Rd. 10	100 metres east of County Rd. 28.
Howden ¼ Line	Stewart Line	Sharpe Line
Morton Line	County Road 10	500 metres westerly of Highway 7

Schedule "J"

Heavy Vehicles Restricted

Road	Section	Restricted Hours
Cathcart Cr.	From Stewart Line to Highway 7	At all times
Dobbin Road	From limits of City of Peterborough to Dobbin Road south	At all times
Elmdale Road	From Brown Line to South entrance to Sysco Food Terminal	At all times
Whittington Dr.	From limits of City of Peterborough west to Dobbin	At all times
Whitfield Road	Bartlett Road/Whitfield Landing Intersection to the east end	At all times
Brown Line	From Hwy. 7 to Airport Road	At all times
Preston Road	Maple Grove Road to Stewart Line	At all times
Brown Line	Hwy 7 to Airport Road	At all times
Davis Road 1.4 km Northbound	From Stewart Line	At all times
Preston Road	Maple Grove Road to Stewart Line	At all times
Brown Line	Hwy 7 to Airport Road	At all times
Whittington Drive	East of 2085 Whittington Drive to End	At all Times

Schedule "K"

No Parking

When properly worded signs have been erected and are on display, no person shall park a vehicle on the street identified except as permitted herein;

Highway	From	To
Brookside Street	Tupper Street North Side – January 1 – June 30 South Side – July 1 – December 31	400 metres west of Tupper Street
Brookside Street	Driveway of 97 Brookside Street	6 metres East of Driveway at Brookside Street
Cedar Crescent	Hutchinson Drive	End of Cedar Crescent on the South East side

1. To lower the speed limit of Wilson Line from 80 km/h to 60 km/h from 1100m west of County Road 10 to the westerly limit.

Financial Impact:

Funding for installation of new signage is included in the operating budget under Road Safety Devices and Signs.

Attachments:

1. Present Traffic & Parking By-law No. 2022-65
2. Map locations of speed limit reduction requests
3. Speed Study Data Results
4. Updated Parking and Traffic By-law No. 2023-62

Respectfully Submitted by,

Reviewed by,

Wayne Hancock
Director of Public Works

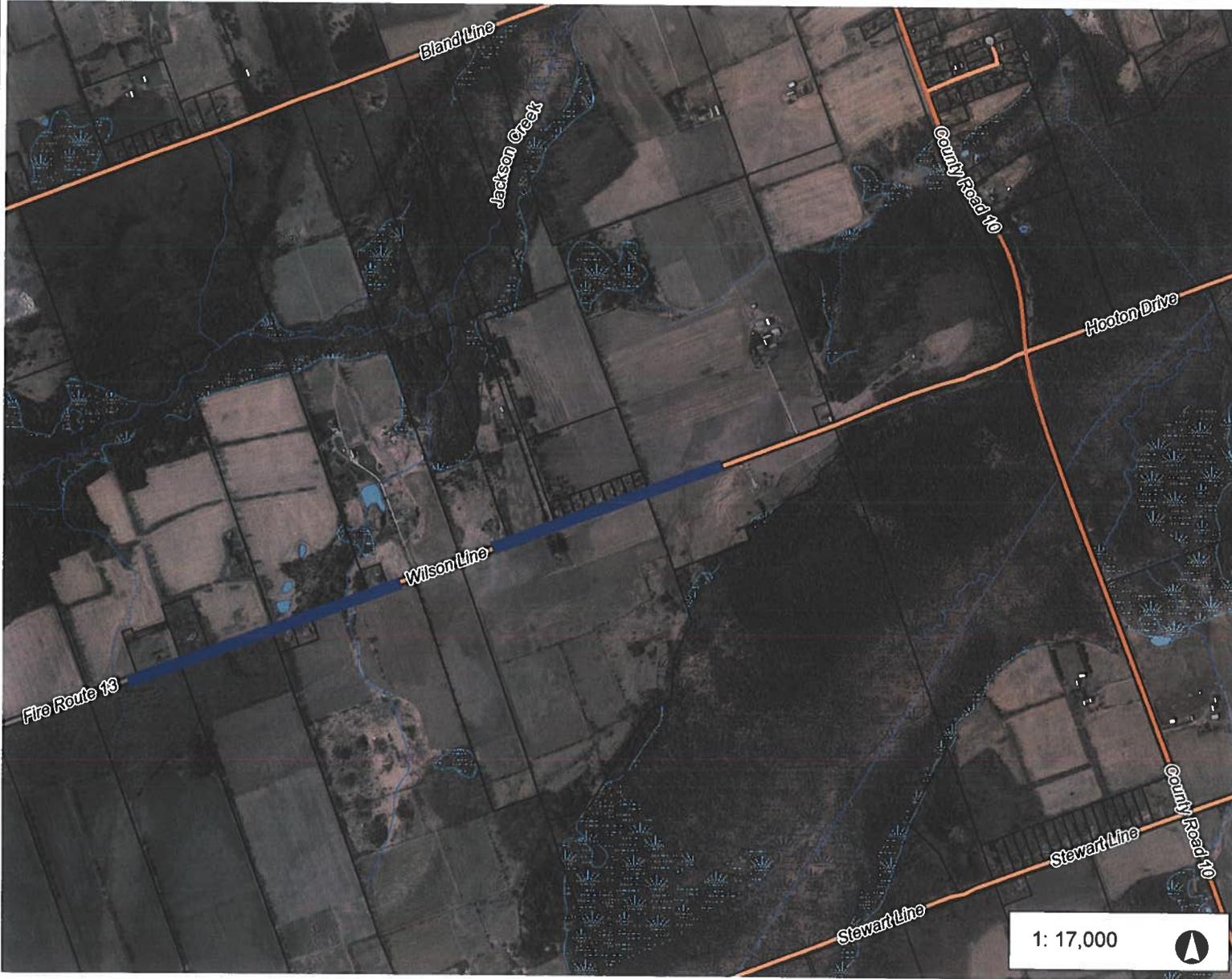
Yvette Hurley
Chief Administrative Officer

Drew Hutchison
Public Works Engineering Technician



County of
Peterborough

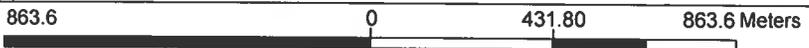
Wilson Line



Legend

- Roads < 50,000**
 - PRIV : Private, PRIV
 - City Arterial
 - City Collector and Local
 - City Owned Unclassified
 - Provincial
 - County
 - Township
 - Water Access Only
- Outside Roads < 50,000**
 - Major Roads
 - Local Roads
- Peterborough Proposed Bypass
- First Nations
- Parcel Fabric
- Parcel First Nations - Canada I
- Rivers**
 - Intermittent
 - Permanent
- Clean Water Act Policies Apply
- Provincially Significant Wetland
- Locally Significant Wetlands
- Non-evaluated Wetlands
- Lakes - Local Scale
- Municipal Boundary - Upper Ti**
- <all other values>
- COUNTY OF PETERBOROUGH

1: 17,000



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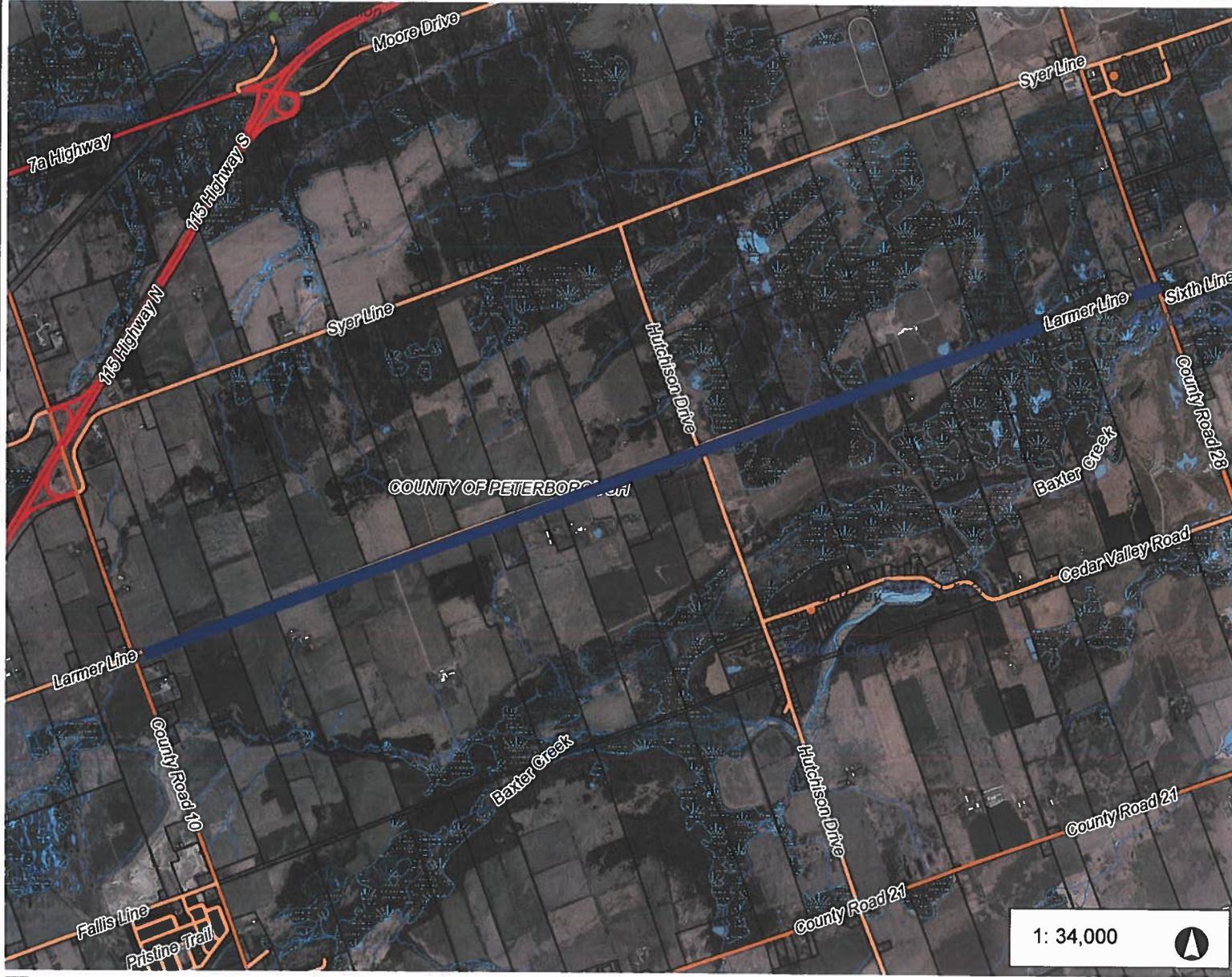
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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes



Larmer Line



Legend

- Roads < 50,000**
 - PRIV : Private, PRIV
 - City Arterial
 - City Collector and Local
 - City Owned Unclassified
 - Provincial
 - County
 - Township
 - Water Access Only
- Outside Roads < 50,000**
 - Major Roads
 - Local Roads
- Peterborough Proposed Bypass Settlement Area (Pt)
- Named Place
- Official Plan Approved
- First Nations**
- Parcel Fabric
- Parcel First Nations - Canada I
- Rivers**
 - Intermittent
 - Permanent
- Clean Water Act Policies Apply
- Provincially Significant Wetlands
- Locally Significant Wetlands
- Non-evaluated Wetlands
- Lakes - Local Scale
- Municipal Boundary - Upper Ti

1: 34,000



1,727.2 0 863.60 1,727.2 Meters

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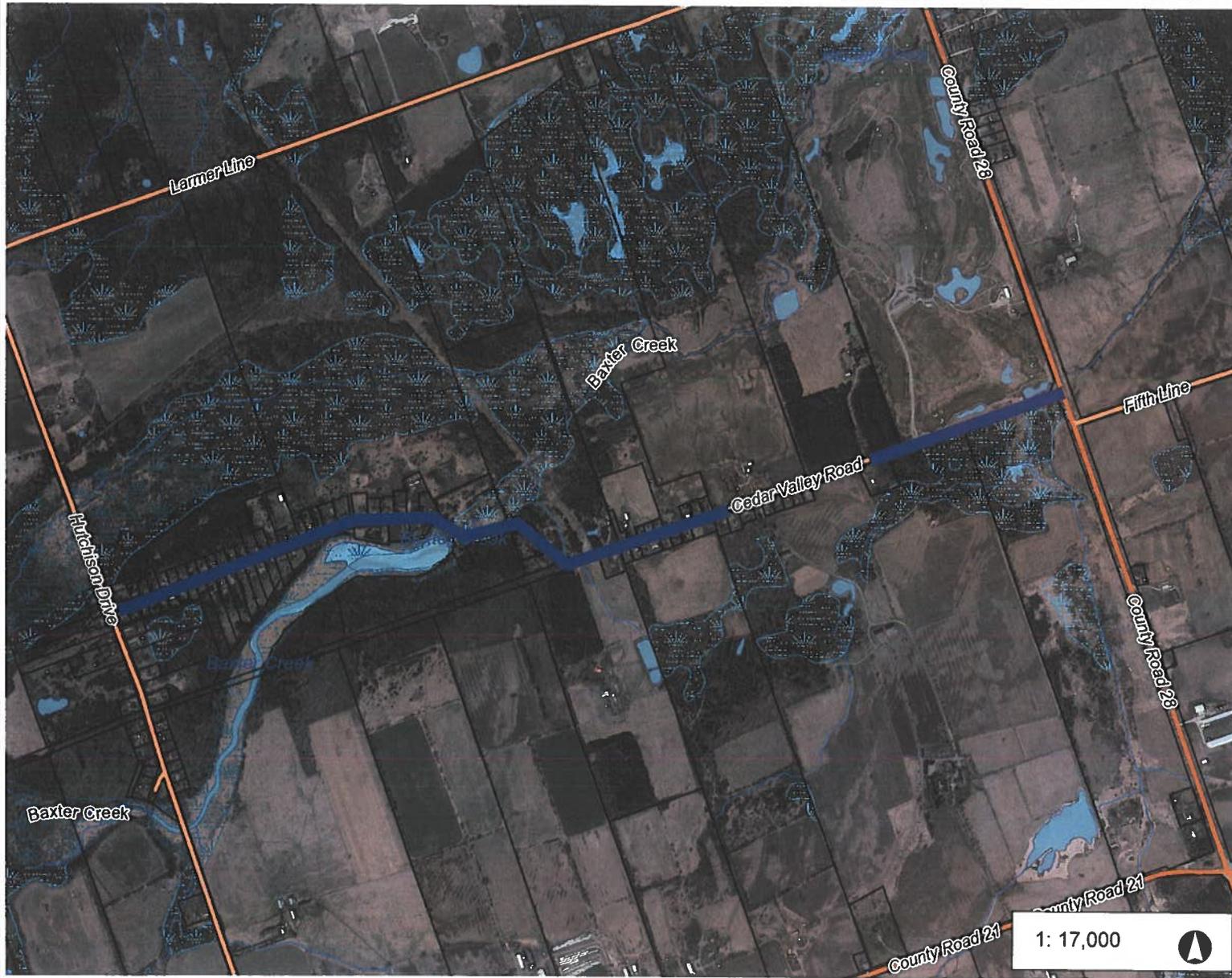
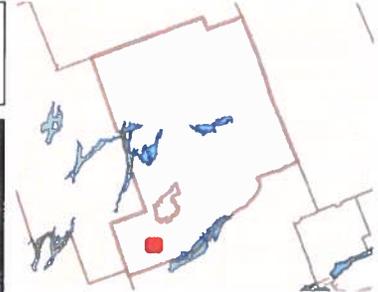
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THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes



Cedar Valley Road



Legend

Roads < 50,000

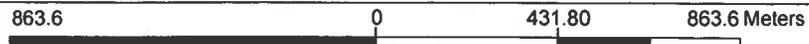
- PRIV ; Private, PRIV
- City Arterial
- City Collector and Local
- City Owned Unclassified
- Provincial
- County
- Township
- Water Access Only

Outside Roads < 50,000

- Major Roads
- Local Roads

Other Features

- Peterborough Proposed Bypass
- First Nations
- Parcel Fabric
- Parcel First Nations - Canada 1
- Rivers
 - Intermittent
 - Permanent
- Clean Water Act Policies Apply
- Provincially Significant Wetlands
- Locally Significant Wetlands
- Non-evaluated Wetlands
- Lakes - Local Scale
- Municipal Boundary - Upper Ti
- <all other values>
- COUNTY OF PETERBOROUGH



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THIS MAP IS NOT TO BE USED FOR NAVIGATION

1: 17,000

Notes

Attachment No. 4

Average Speed

Technician Name: administrator

Location: Wilson Line

Report Period: 8/29/2023 to 9/7/2023

Address:

Total Vehicle Count: 706

Speed Limit: 60



Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Average Weekday	Average Weekend	Average Week	Average Speed	85% Speed
00-01	0	0	53	0	61	52	0	57	52	55	55	60
01-02	0	51	0	62	47	0	0	53	0	53	53	62
02-03	0	0	0	0	0	0	0	n/a	n/a	n/a	n/a	n/a
03-04	0	0	0	0	0	0	0	n/a	n/a	n/a	n/a	n/a
04-05	0	0	0	0	0	0	0	n/a	n/a	n/a	n/a	n/a
05-06	0	0	0	0	0	0	0	n/a	n/a	n/a	n/a	n/a
06-07	0	0	64	63	0	0	0	64	0	64	64	66
07-08	34	54	50	61	57	60	65	51	63	54	54	65
08-09	36	58	55	54	54	62	64	51	63	55	55	63
09-10	53	32	51	52	37	50	42	45	46	45	45	63
10-11	43	51	55	50	48	57	50	49	54	51	51	61
11-12	47	55	54	44	50	53	57	50	55	51	51	60
12-13	57	59	53	50	50	31	58	54	45	51	51	62
13-14	70	53	59	55	49	58	60	57	59	58	58	68
14-15	47	49	55	51	43	60	54	49	57	51	51	64
15-16	53	57	58	59	57	47	48	57	48	54	54	70
16-17	46	62	55	61	61	H 70	H 70	57	70	61	61	68
17-18	59	51	57	56	61	53	51	57	52	55	55	65
18-19	62	52	59	63	50	49	45	57	47	54	54	65
19-20	54	41	57	47	50	33	65	50	49	50	50	63
20-21	33	50	47	40	H 62	54	0	46	54	48	48	59
21-22	55	62	58	H 68	51	52	66	59	59	59	59	69
22-23	H 75	54	65	0	58	63	0	63	63	63	63	65
23-24	0	H 68	H 70	0	0	0	58	69	58	65	65	70
AVG:	52	53	57	55	53	53	57	55	55	55	55	64

Speed Statistics

SpeedStat-7

Site: 1313 Larmer Line.2.3WE
Description: MetroCount Factory Test Setup
Filter time: 7:39 August 15, 2023 => 11:56 August 18, 2023
Scheme: Vehicle classification (Scheme F3)
Filter: Cls(1-13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Vehicles = 1375

Posted speed limit = 80 km/h, Exceeding = 255 (18.55%), Mean Exceeding = 88.76 km/h

Maximum = 134.7 km/h, Minimum = 10.4 km/h, Mean = 67.1 km/h

85% Speed = 82.66 km/h, 95% Speed = 91.44 km/h, Median = 68.22 km/h

20 km/h Pace = 59 - 79, Number in Pace = 752 (54.69%)

Variance = 269.59, Standard Deviation = 16.42 km/h

Speed Bins (Partial days)

Speed	Bin	Below	Above	Energy	vMult	n * vMult
0 - 10	0 0.000%	0 0.000%	1375 100.0%	0.00	0.00	0.00
10 - 20	12 0.873%	12 0.873%	1363 99.13%	0.00	0.00	0.00
20 - 30	35 2.545%	47 3.418%	1328 96.58%	0.00	0.00	0.00
30 - 40	53 3.855%	100 7.273%	1275 92.73%	0.00	0.00	0.00
40 - 50	77 5.600%	177 12.87%	1198 87.13%	0.00	0.00	0.00
50 - 60	198 14.40%	375 27.27%	1000 72.73%	0.00	0.00	0.00
60 - 70	382 27.78%	757 55.05%	618 44.95%	0.00	0.00	0.00
70 - 80	363 26.40%	1120 81.45%	255 18.55%	0.00	0.00	0.00
80 - 90	175 12.73%	1295 94.18%	80 5.818%	0.00	0.00	0.00
90 - 100	55 4.000%	1350 98.18%	25 1.818%	0.00	0.00	0.00
100 - 110	20 1.455%	1370 99.64%	5 0.364%	0.00	0.00	0.00
110 - 120	3 0.218%	1373 99.85%	2 0.145%	0.00	0.00	0.00
120 - 130	1 0.073%	1374 99.93%	1 0.073%	0.00	0.00	0.00
130 - 140	1 0.073%	1375 100.0%	0 0.000%	0.00	0.00	0.00
140 - 150	0 0.000%	1375 100.0%	0 0.000%	0.00	0.00	0.00
150 - 160	0 0.000%	1375 100.0%	0 0.000%	0.00	0.00	0.00
160 - 170	0 0.000%	1375 100.0%	0 0.000%	0.00	0.00	0.00
170 - 180	0 0.000%	1375 100.0%	0 0.000%	0.00	0.00	0.00
180 - 190	0 0.000%	1375 100.0%	0 0.000%	0.00	0.00	0.00
190 - 200	0 0.000%	1375 100.0%	0 0.000%	0.00	0.00	0.00

Total Speed Rating = 0.00

Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

Limit	Below	Above
0 80 (PSL)	1120 81.5%	255 18.5%

Speed Statistics

SpeedStat-8

Site: Cedar Valley Line.2.3WE
Description: MetroCount Factory Test Setup
Filter time: 9:16 August 29, 2023 => 11:47 September 1, 2023
Scheme: Vehicle classification (Scheme F3)
Filter: Cls(1-13) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Vehicles = 1091

Posted speed limit = 50 km/h, Exceeding = 901 (82.58%), Mean Exceeding = 63.63 km/h

Maximum = 98.3 km/h, Minimum = 14.9 km/h, Mean = 60.1 km/h

85% Speed = 71.46 km/h, 95% Speed = 77.58 km/h, Median = 60.48 km/h

20 km/h Pace = 51 - 71, Number in Pace = 708 (64.89%)

Variance = 124.25, Standard Deviation = 11.15 km/h

Speed Bins (Partial days)

Speed	Bin	Below	Above	Energy	vMult	n * vMult
0 - 10	0 0.000%	0 0.000%	1091 100.0%	0.00	0.00	0.00
10 - 20	2 0.183%	2 0.183%	1089 99.82%	0.00	0.00	0.00
20 - 30	7 0.642%	9 0.825%	1082 99.18%	0.00	0.00	0.00
30 - 40	41 3.758%	50 4.583%	1041 95.42%	0.00	0.00	0.00
40 - 50	140 12.83%	190 17.42%	901 82.58%	0.00	0.00	0.00
50 - 60	342 31.35%	532 48.76%	559 51.24%	0.00	0.00	0.00
60 - 70	360 33.00%	892 81.76%	199 18.24%	0.00	0.00	0.00
70 - 80	163 14.94%	1055 96.70%	36 3.300%	0.00	0.00	0.00
80 - 90	33 3.025%	1088 99.73%	3 0.275%	0.00	0.00	0.00
90 - 100	3 0.275%	1091 100.0%	0 0.000%	0.00	0.00	0.00
100 - 110	0 0.000%	1091 100.0%	0 0.000%	0.00	0.00	0.00
110 - 120	0 0.000%	1091 100.0%	0 0.000%	0.00	0.00	0.00
120 - 130	0 0.000%	1091 100.0%	0 0.000%	0.00	0.00	0.00
130 - 140	0 0.000%	1091 100.0%	0 0.000%	0.00	0.00	0.00
140 - 150	0 0.000%	1091 100.0%	0 0.000%	0.00	0.00	0.00
150 - 160	0 0.000%	1091 100.0%	0 0.000%	0.00	0.00	0.00
160 - 170	0 0.000%	1091 100.0%	0 0.000%	0.00	0.00	0.00
170 - 180	0 0.000%	1091 100.0%	0 0.000%	0.00	0.00	0.00
180 - 190	0 0.000%	1091 100.0%	0 0.000%	0.00	0.00	0.00
190 - 200	0 0.000%	1091 100.0%	0 0.000%	0.00	0.00	0.00

Total Speed Rating = 0.00

Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

Limit	Below	Above
0 50 (PSL)	190 17.4%	901 82.6%

Attachment No. 5

Township of Cavan Monaghan

By-law No. 2023-62

Being a by-law to regulate traffic and parking within the limits of the Township of Cavan Monaghan.

Whereas the Municipality has the authority to pass by-laws to regulate the foregoing, pursuant to the Municipal Act, 2001;

Now Therefore, the Council of the Township of Cavan Monaghan hereby enacts as follows:

Part 1 Definitions

For the purpose of this By-law:

“**Bicycle**” includes tricycles and unicycles but does not include a motor assisted bicycle.

“**Boulevard**” means the portion of the road allowance lying between the sidewalk and the roadway. On roads where there are no sidewalks it shall mean the portion of the road allowance lying between the travelled portion of the road and the limit of the road allowance.

“**Bridge**” means any bridge spanning a water course or ravine.

“**Commercial Vehicle**” means a motor vehicle having permanently attached thereto a truck or delivery body and includes ambulances, hearses, casket wagons, fire apparatus, police patrols, motor buses and tractors. A van that is used for commercial purposes is to be considered a commercial vehicle.

“**Gross Weight**” means the combined weight of the vehicle and the load.

“**Heavy Vehicle**” means a vehicle, object or contrivance for moving loads having a registered gross weight, including the vehicle, object or contrivance and load, greater than two thousand, two hundred and sixty seven decimal nine six (2,267.96) kilograms, but does not include a passenger vehicle, ambulance, public works vehicle, fire department vehicle, police vehicle or a privately owned commercial vehicle which is being driven to or from the residence by the owner or other family member, or a commercial motor vehicle making a delivery to or collecting from a bonafide destination, which cannot be reached by way of a highway or highways upon which heavy traffic is not prohibited by this By-law.

“**Highway**” includes a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, designed and intended for, or

used by, the general public for the passage of vehicles.

“Intersection” means the area embraced within the prolongation or connection of the lateral curb lines, or, if none, that lateral boundary lines of two or more highways that join one another at an angle, whether or not one highway crosses the other.

“Minister” means the Minister of Transportation.

“Park or Parking” when prohibited, means the standing of a vehicle, whether occupied or not, except when standing temporarily for the purpose of and while actually engaged in, loading or unloading merchandise and passengers.

“Pedestrians” means persons afoot, persons in wheelchairs and children in wheeled carriages, sleds and wagons.

“Police Officer or Officer” means a member of the Ontario Provincial Police Force, Peterborough Police Services or a Municipal Law Enforcement Officer authorized to enforce the provisions of this By-law, and designated as a Provincial Offences Officer and includes all other persons appointed as Provincial Offences Officers.

“Restricted Parking Area” means any of the locations named or described in Schedules “B”, “C”, and “D” attached to and forming part of this By-law.

“Roadway” means that part of the highway which is improved, designated or ordinarily used for vehicular traffic, but does not include the shoulder, and, where a highway includes two or more separate roadways, the term “Roadway” refers to any one roadway separately but not to all roadways collectively.

“Sidewalk” means any sidewalk, pathway, footpath or other area forming part of any highway or bridge or boulevard, or other means of walkways used by, or set apart for, the use of pedestrians.

“Stand or Standing” when prohibited, means the halting of a motor vehicle, whether occupied or not, except when necessary to avoid conflict with other traffic or in compliance with the direction of a police officer, a traffic control sign or traffic control signal.

“Stop or Stopping” when prohibited, means the halting of a vehicle, even momentarily whether occupied or not, except when necessary to avoid conflict with other traffic or in compliance with the directions of a constable or other police officer, or of a traffic control sign or signals.

“Street” includes a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, designed and intended for, or

used by, the general public for the passage of vehicles.

“**Time**” where an expression of time occurs or where any hour or other period of time is stated, the time referred to shall be Eastern Standard Time, except in periods when Daylight Saving Time is in effect, such time shall be Eastern Daylight Saving Time.

“**Traffic**” includes pedestrians, ridden or herded animals, vehicles, buses and other conveyances, either singularly or together using any street for purposes of travel.

“**Traffic Control Device**” means any sign, roadway, curb or sidewalk marking, or other device erected or placed under the authority of the Municipal Council for the purpose of guiding or directing traffic.

“**Vehicle**” includes a bicycle, a motorcycle, motor vehicle trailer, traction engine, farm tractor, road building machine and any vehicle propelled or driven by any kind of power, including muscular power, but does not include a motorized snow vehicle or the cars of electric or steam railways running only upon rails.

Part 2 Traffic

- | | | |
|---|-----|---|
| Enforcement | 2.1 | The provisions of this By-law may be enforced by an Ontario Provincial Police Officer, Peterborough Police Services or a Provincial Offences Officer or any persons authorized to enforce the By-law. |
| Stop Signs | 2.2 | The intersections on highways, or parts of Highways, within the Township of Cavan Monaghan, as described in Schedule “E”, attached to and forming part of this By-law, shall be designated as “Stop” intersections |
| Excavation & Barricade | 2.3 | No person or persons shall open excavations, erect barricades, store earth or construction materials, or park work equipment on any portion of any highway without first obtaining approval from the Township of Cavan Monaghan Director of Public Works, or his/her designate. Such approval shall be registered with the Clerk of the Township of Cavan Monaghan. |
| Placement Material on Township Property | 2.4 | No person shall place snow, stones, soil, rubbish or materials of any kind from |

private property upon the highways, boulevards or sidewalks of the Township of Cavan Monaghan.

- | | | |
|--|------|---|
| Remove/Injure Traffic Signs | 2.5 | No person or persons shall, without lawful authority, attempt to or, in fact, alter, deface, injure, break down or remove any official traffic control device or any inscription, shield or insignia thereon, or part thereof. |
| Heavy Vehicles Prohibited | 2.6 | When properly worded signs have been erected and are on display, no person shall drive, move or otherwise operate "Heavy Vehicles" upon any highway or part of a highway named or described in Schedule "J", attached to and forming part of this By-law. |
| Load Restrictions | 2.7 | When properly worded signs have been erected and are on display, no person shall operate a vehicle on a highway or part of a highway if any axle of the commercial vehicle or its trailer transmits to the highway a weight in excess of 5 tonnes (5000 kg.) between March 1 and April 30. |
| Bicycle Riders to Ride on Right | 2.8 | A person riding a bicycle on a roadway shall ride as near to the right hand side of the roadway as is practicable and shall exercise due care when passing a standing vehicle or one proceeding in the same direction. |
| Motorized Snow Vehicles after 11:00 p.m. | 2.9 | (a) No person shall drive a motorized snow vehicle upon any highway within the Township of Cavan Monaghan between the hours of 11:01 p.m. and 7:00 a.m.

(b) Section (a) does not apply to a person or persons driving a motorized snow vehicle who is proceeding directly to the residence of the registered owner of the motorized snow vehicle or directly to a place of employment or by emergency services for emergency purposes. |
| Maximum 15 KMH | 2.10 | When properly worded Speed Limit signs have been erected and are on display, no |

person shall drive a motor vehicle at a rate of speed greater than 15 kilometres per hour on any highway or parts of a highway described in Schedule "F", attached to and forming part of this By-law.

Maximum 40 KMH 2.11 When properly worded Speed Limit signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 40 kilometres per hour on any highway or parts of a highway described in Schedule "G", attached to and forming part of this By-law.

Maximum 50 KMH 2.12 When properly worded Speed Limit signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 50 kilometres per hour on any highway or parts of a highway described in Schedule "H", attached to and forming part of this By-law.

Maximum 60 KMH 2.13 When properly worded Speed Limit signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 60 kilometres per hour on any highway or parts of a highway described in Schedule "I" attached to and forming part of this By-law.

Part 3 Parking

Parking Restricted 3.1 When properly worded signs have been erected and are on display, no person shall park a vehicle on any highway between the limits and periods of time as described in Schedule "A" attached to and forming part of this By-law.

(a) When properly worded signs have been erected and are on display, between the hours of 9:00 a.m. and 6:00 p.m., from Monday to Saturday inclusive, no person shall park a vehicle for any one period of time in excess of fifteen (15) minutes on those parts of streets named or described in Schedule "C".

(b) When properly worded signs have been erected and are on display at all entrances to the Millbrook Ward, no person shall park a vehicle on any street between the hours of 2:00 a.m. and 7:00 a.m. of the same day from November 15 of one year and April 1 of the following year.

(c) When properly worded signs have been erected and are on display, between the hour of 9:00 a.m. and 6:00 p.m., from Monday to Saturday inclusive, no person shall park a vehicle for any one period of time in excess of two (2) hours on those streets or parts of streets named or described in Schedule "D" of this By-law.

(d) When properly worded signs have been erected and are on display, no person shall park on a vehicle on the street except as permitted by Schedule "K".

Parking Prohibited

3.2 When properly worded signs have been erected and are on display, no person shall, at any time, park a vehicle in the following places within the Township of Cavan Monaghan:

In any area described in Schedule "B", Schedule "C", and Schedule "D", attached to and forming part of this By-law.

No Parking General

3.3 No person, within the Township of Cavan Monaghan, shall park a vehicle in any of the following places;

(a) In front of a public or private driveway;

(b) Within nine (9) metres of an intersection;

(c) Within three (3) metres of a Fire Hydrant;

(d) On any highway between the hours of 12:01 a.m. and 7:00 a.m.;

(e) On any Highway in such a manner as to

obstruct or impede the removal of snow from the highway;

(f) Within any cul-de-sac area;

(g) No person shall park or stop a vehicle that obstructs a sidewalk or walkways, or obstruct the sodded boulevard beside the driveway approach between the sidewalk and curb line.

Stopping Prohibited

3.4 No person shall stop a vehicle in any of the following places:

(a) In front of the entrance to a public lane or a private driveway or so as to prevent entry to or exit from such public land or private driveway;

(b) Within three (3) metres of a Fire Hydrant;

(c) On any highway in such a manner as to obstruct or impede the removal of snow from the highway;

(d) On any highway in such a manner as to prevent the convenient removal of another vehicle previously parked or standing;

(e) On the highway side of any vehicle previously parked or standing;

(f) Alongside or across from any obstruction or excavation in such a manner as to obstruct, impede or otherwise restrict the normal flow of traffic;

(g) Opposite another vehicle, parked or standing, on any highway wherein said highway is less than eleven (11) metres in width;

(h) On any highway as described in Schedule "A", attached to and forming part of this By-law.

Part 4 Penalties

- 4.1 Any person violating any of the provisions of this By-law is liable to the penalty as prescribed by the applicable law for each offence.

Where a vehicle is found parked in contravention of the provisions contained in Part 3 of this By-law, an Ontario Provincial Police, Peterborough Police Services or a Provincial Offences Officer or a Municipal Law Enforcement Officer authorized to enforce the By-law finding the vehicle may have the vehicle towed away at the expense of the owner.

Part 5 Effective Dates

- 5.1 This By-law shall come into force and effect upon approval and that By-law No. 2022-65 be repealed in its entirety.
- 5.2 This By-law shall come into force and take effect upon final passage by the Township of Cavan Monaghan and when signs have been erected and are on display in compliance with the regulations of the Ministry of Transportation.

Part 6 General Provisions

- 6.1 The short title of this By-law shall be the "Parking and Traffic By-law".

Read a first, second and third time and passed this 18th day of December, 2023.

Matthew Graham
Mayor

Cindy Page
Clerk

Schedule "A"

No Stopping

When properly worded signs have been erected and are on display, no person shall park a vehicle on any of the highways or parts of highways hereinafter set out:

Anne Street	North Side – from Hay Street to Cavan Street East Side – from Cavan Street to Frederick Street
Centre Street	North Side – from Union Street to a point 35 metres east of Union Street South Side – from Union Street to west limits of Centre Street
Distillery Street	West Side
Duke Street	East Side – from King Street east to a point 58 metres south of King Street East
Needler's Lane	North Side – from Allan Lane to Hay Street South Side - from Baxter Creek to a point 15 metres west of Baxter Creek
Frederick Street	South Side – from Anne Street to Main Street
Hay Street	West Side – entire side of street to Anne Street East Side – from a point 50 metres south of King Street East to Needler's Lane
Huston Street	West Side – from King Street West to south limits of Huston Street
Lisa Court	Both Sides – within circle at south end of Lisa Court
Main Street	East Side – from a point 69 metres south of King Street East to Charles Street East Side – from Marshall Street to a point 67 metres north of Frederick Street East Side – from Frederick Street to the south limits of Main Street West Side – from a point 48 metres south of King Street East to a point 35 metres south of Charles Street West Side – from a point 45 metres south of Marshall Street to a point 30 metres north of Frederick Street

Needler's Lane	East Side – from a point 27 metres south of Distillery Street to a point 66 metres south of Distillery Street West Side – from Distillery Street to a point 69 metres south of Distillery Street
Queen Street	West Side – from King Street West to the north limits of Queen Street
Union Street	West Side – from Centre Street to a point 50 metres south of Centre Street

Schedule “B”

Restricted Parking

Unless otherwise properly signed, no person shall park a vehicle on any highway for longer than four (4) hours or in such a manner as to impede snow removal.

Schedule “C”

Restricted Parking

When properly worded signs have been erected and are on display, no person shall park a vehicle on a highway or parts of highways hereinafter set out in excess of fifteen (15) minutes:

Union Street West Side – From a point 9 metres north of King Street West to a point 19 metres north of King Street West

Schedule “D”

Restricted Parking

When properly worded signs have been erected and are on display, no person shall park a vehicle on a highway or parts of highways hereinafter set out in excess of two (2) hours:

Hay Street	East Side – Between King Street East to a point 50 metres south of King Street East
Distillery Street	West Side – Between King Street East and Needler’s Lane East Side – Between King Street East and the north abutment of Baxter Creek Bridge
Centre Street	South Side – Between Tupper Street and Union Street North Side – Between Tupper Street and a point 35 metres east of Union Street
Union Street	East Side – Between King Street West and Centre Street West Side – Between a point 19 metres north of King Street West and a point 50 metres south of Centre Street

Schedule "E"

Providing for the Erection of Stop Signs at Intersections

The intersections on highways set out in Column 1 are designated as intersections where Stop signs shall be erected at the locations shown in Column 2.

Column 1: Intersection

Column 2: Facing Traffic

McCamus ¼ Line at Eagleson Line	Southbound on McCamus ¼ Line
McCamus ¼ Line at Carmel Line	Northbound on McCamus ¼ Line
Brackenridge Dr. at Carmel Line	Southbound on Brackenridge Dr.
Brackenridge Dr. at Deyell Line	Northbound on Brackenridge Dr.
T-Way Dr. at Deyell Line	Northbound on T-Way Dr.
Thorne Dr. at Deyell Line	Southbound on Thorne Dr.
Thorne Dr. at Zion Line	Northbound on Thorne Dr.
Bee Dr. at Deyell Line	Northbound on Bee Dr.
Ava Cr. at Deyell Line	Southbound on Ava Cr.
Carveth Dr. at Zion Line	Southbound on Carveth Dr.
Elgar Dr. at Zion Line	Northbound on Elgar Dr.
Elgar Ct. at Elgar Dr.	Westbound on Elgar Ct.
White Birch Rd. at Elgar Dr.	Westbound on White Birch Rd. White
Birch Rd. at White Birch Rd.	Eastbound on White Birch Rd.
Zion Line at Glamorgan Rd.	Westbound on Zion Line
Hutchison Dr. at Zion Line	North and Southbound on Hutchison Dr.
Hutchison Dr. at Cedar Valley Rd.	Westbound on Cedar Valley Rd.
Hutchison Dr. at Cedar Cr.	Eastbound on Cedar Cr.
Hutchison Dr. at Larmer Line	North and Southbound on Hutchison Dr.
Hutchison Dr. at Syer Line	Northbound on Hutchison Dr.
Glamorgan Rd. at Fallis Line	Northbound on Glamorgan Rd.
Fallis Line at Tapley ¼ Line	East and Westbound on Fallis Line
Valleyview Drive at Fallis Line west side	Southbound on Valleyview
Valleyview Drive at Fallis Line east side	Southbound on Valleyview
Morningside Place at Valleyview Drive	Southbound on Morningside
Scout Cr. at Tapley ¼ Line	Westbound on Scout Cr.
Tapley ¼ Line at Valley Rd.	Westbound on Valley Rd.
Deer Ave. at Valley Rd.	Southbound on Deer Ave.
Acadia Ct. at Valley Rd.	Northbound on Acadia Ct.
Pine Tree Cr. at Valley Rd.	Eastbound on Pine Tree Cr.
Maple Tree Cr. at Pine Tree Cr.	Northbound on Maple Tree Cr.
Plains Circle at Deer Ave	Eastbound on Plains Circle
Plains Circle at Plains Circle	Southbound on Plains Circle
Larmer Line at Tapley ¼ Line	Westbound on Larmer Line
Deer Ave. at Larmer Line	Northbound on Deer Ave.
Valley Rd. at Larmer Line	Northbound on Valley Rd.
Vista Cr. at Syer Line	Southbound on Vista Cr.

Syer Line at Tapley ¼ Line
Highview Cr. at Syer Line
Dranoel Rd. at Syer Line
Dranoel Dr. at Dranoel Rd.
Ford Cr. at Ford Dr.
Moore Dr. at Moore Dr.
Morton Line at Dranoel Rd.
Tapley ¼ Line at Morton Line
Sharpe Line at Dranoel Rd.
Jack Lane at Sharpe Line
Sharpe Line at Winslow ¼ Line
Cora Drive at Sharpe Line
Howden ¼ Line at Sharpe Line

Cathcart Cr. at Stewart Line
Preston Rd. at Stewart Line
Howden ¼ Line at Stewart Line

Winslow ¼ Line at Stewart Line

Darling Cr. at Stewart Line
Darling Cr. at Darling Cr.
Jill Lane at Stewart Line
Howden ¼ Line at Hooton Dr.

Hooton Dr. at Hooton Dr.
Fieldview Dr. at Hooton Dr.
Hooton Dr. at Preston Rd.
Best Rd. at Hayes Line
Jones ¼ Line at Bland Line
Shields Dr. at Bland Line
Hayes Line at Jones ¼ Line
Albert St. at Bland Line
High St. at Mt. Pleasant Rd.
Albert St. at Mt. Pleasant Rd.
Meadow Lane at Workman St.
Rose Cr. at Kennedy Dr.
Ashley Cr. at Cathcart Cr.
Brewda Cres. at Kalman Drive
Kalman Drive at Carmel Line
Dufferin Street at Gravel Road
Needler's Lane and Distillery St.
Needler's Lane and Allen Lane
Hay Street and Needler's Lane
Prince Street at Anne Street
Princess Street at Anne Street

East and Westbound on Syer Line
Southbound on Highview Cr.
Westbound on Syer Line
Westbound on Dranoel Dr.
Eastbound on Ford Cr.
Eastbound on Moore Dr.
Westbound on Morton Line
Northbound on Tapley ¼ Line
Westbound on Sharpe Line
Southbound on Jack Lane
Westbound on Sharpe Line
Northbound on Cora Dr.
North and Southbound on Howden ¼
Line
Northbound on Cathcart Cr.
Southbound on Preston Rd.
North and Southbound on Howden ¼
Line
North and Southbound on Winslow ¼
Line
Northbound on Darling Cr.
Southbound on Darling Cr.
Northbound on Jill Lane
North and Southbound on Howden ¼
Line
Westbound on Hooton Dr.
Northbound on Fieldview Dr.
Eastbound on Hooton Dr.
Northbound on Best Rd.
Southbound on Jones ¼ Line
Northbound on Shields Dr.
Northbound on Jones ¼ Line
Northbound on Albert St.
North and Southbound on High St.
Southbound on Albert St.
Westbound on Meadow Lane
Westbound on Rose Cr.
Eastbound on Ashley Cr.
Westbound on Brewda Cres.
Northbound on Kalman Drive
Eastbound on Dufferin Street
Northbound on Needler's Lane
Southbound on Allen Lane
Westbound on Needler's Lane
Northbound on Prince Street
Northbound on Princess Street

Cavan Street at Anne Street
Anne Street at Frederick Street
Frederick Street at Anne Street
Frederick Street at Main Street
Frederick Street at Main Street
Marshall St. at Main Street
Charles Street at Main St.
Charles Street at Main St.
Sowden Lane at Main St.
Union St. at Centre Street
Union St. at Manor Drive
Baxter Creek Ct. at Brookside St.
Burnham Ct. at McGuire Dr.
Wing St. at Bank St. South
Century Blvd. at Centennial Lane
Century Blvd. at Nina Court
Bartlett Rd. at Whitfield Rd.
Maplehill Court at Maplehill Drive
Avenue at Longview Drive
Filman Crescent at Longview Drive
Campbell Avenue at Campbell Avenue
Whittington Drive at Dobbin Road
Whittington Drive at Elmdale Road
Davis Road at Stewart Line
Davis Road at Maple Grove Road
Grove Road at Preston Road
Elmdale Road at Brown Line
Brown Line at Elmdale Road
Worboy Ct. at Beardsmore Road
Carolyn Street at Johnston Dr.
Skiview Dr. at Hillview Dr.

Eastbound on Cavan Street
Southbound on Anne Street
Eastbound on Frederick Street
Westbound on Frederick Street
Eastbound on Frederick Street
East and Westbound on Marshall St.
Westbound on Charles Street
Eastbound on Charles Street
Westbound on Sowden Lane
North and Southbound on Union St.
All (4) Way Stop
Northbound on Baxter Creek Ct.
Southbound on Burnham Ct.
Westbound on Wing St.
Southbound on Century Blvd.
Northbound on Century Blvd.
Southbound on Bartlett Rd
Eastbound on Maplehill Court Campbell
East & Westbound on Campbell Ave
Eastbound on Filman Crescent
Southbound on Campbell Ave
East & Westbound on Whittington Drive
East & Westbound on Whittington Drive
Southbound on Davis Road
Northbound on Davis Road Maple
Westbound on Maple Grove Road
Southbound on Elmdale Road
East & Westbound on Brown Line
Eastbound on Worboy Ct.
Northbound on Carolyn Street
Westbound on Skiview Dr.

Schedule "F"

15 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 15 kilometres per hour as hereinafter set out:

Highway	From	To
Mervin Line	Airport Road	End

Schedule "G"

40 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 40 kilometres per hour as hereinafter set out:

Highway	From	To
Ford Drive	Highway 7A	End
Ford Crescent	Highway 7A	Ford Drive
Highview Crescent	Syer Line	End
Carveth Drive	Zion Line	Huston

Schedule “H”

50 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 50 kilometres per hour as hereinafter set out:

Highway	From	To
Carmel Line	County Rd. 28	1150 meters westerly
Edgewood Park Drive	Mount Pleasant Road	End
Preston Road	Maple Grove Road	Stewart Line
Hooton Drive	Preston Road	650 meters westerly
Larmer Line	Tapley ¼ Line	1300 metres easterly
Tapley ¼ Line	Fallis Line	Syer Line
Cedar Valley Road	Hutchison Drive	County Rd. 28
Hutchison Drive	100 metres north of Cedar Valley Road	700 metres southerly
Morton Line	Highway 7	500 metres westerly
Sharpe Line	County Rd. 10	1200 metres easterly
Sharpe Line	County Rd. 10	700 metres westerly
Scout Crescent	Tapley ¼ Line	End
Plains Circle	Deer Avenue	End
Pine Tree Crescent	Valley Rd.	End
Maple Tree Crescent	Pine Tree Crescent	End
Valley Road	Tapley ¼ Line	Larmer Line
Acadia Court	Valley Road	End
Valleyview Drive	Fallis Line	Fallis Line
Morningside Place	Valleyview Drive	End
White Birch Road	Elgar Drive	End
Kennedy Drive	Mount Pleasant Road	End
Rose Crescent	Kennedy Drive	End
Workman Street	Mount Pleasant Road	Mill Street
Meadow Lane	Workman Street	End
High Street	Mill Street	End
Mill Street	Workman Street	High Street
Albert Street	Mount Pleasant Road	Bland Line
Rothsay Avenue	Lansdowne Street	End
Ashley Cres.	Cathcart Cres.	End
Syer Line	County Rd. 10	100 metres west of the Municipal address 888 Syer Line
Clifford Line	Highway 7	End
Dobbin Road	Whittington Drive	1.2 km to city limits
Whittington Drive	Rosemount Gardens	3.2 Easterly
Davis Road	Stewart Line	Maple Grove Road

Elmdale Road	North Monaghan	Brown Line
Brown Line	Hwy 7	Airport Road
Beardsmore Road	Airport Road	Worboy Court
Johnston Drive	Worboy Court	City Limits
Whitfield Road	County Road 28	End
Bartlett Road	Moncrief Line	Whitfield Road
Longview Drive	Sherbrooke St. W.	End
Campbell Avenue	Longview Drive	East end
Campbell Avenue	Longview Drive	Campbell Avenue
Filman Crescent	Longview Drive	Longview Drive
Carolyn Street	Beardsmore Road	End
Worboy Court	Beardsmore Road	End
Brown Line	Airport Road	East end
Maplehill Drive	Sherbrooke Street	End
Maplehill Court	Maplehill Drive	End
Deer Avenue	Larmer Line	Valley Road
Elgar Court	Elgar Drive	End
Kalman Drive	Carmel Line	End
Brewda Court	Kalman Drive	End
Skiview Drive	Hillview Drive	End
Miller Street	County Road 10	End
King George Street	County Road 10	Elizabeth Street
Elizabeth Street	Miller Street	King George St.
Poplar Plains Drive	County Road 10	Fallingbrook Drive
Cavan Woods Drive	County Road 10	Fallingbrook Drive
Fallingbrook Drive	Poplar Plains Drive	Cavan Woods
Mount Pleasant Road	Queen Mary Street	High Street
Blue Jay Street	Queen Mary Street	Alexander Drive
Alexander Drive	Blue Jay Street	End
Jill Lane	Stewart Line	End
Fieldview Drive	Hooton Drive	End
Huston Street	Millbrook Ward limits	Carveth Drive
Sunset Drive	Highway 7A	End
Fallis Line	County Road 10	Tapley ¼ Line

All Highways within the Millbrook Settlement Area.

Schedule "I"

60 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 60 kilometres per hour as hereinafter set out:

Highway	From	To
Stewart Line	County Rd. 10	Preston Road
Stewart Line	County Rd. 10	Dranoel Road
Wilson Line	County Rd. 10	Westerly limit
Darling Crescent	Stewart Line	End
Jack Lane	Sharpe Line	End
Vista Crescent	Syer Line	End
Elgar Drive	Zion Line	End
Bee Drive	Deyell Line	End
Ava Crescent	Deyell Line	End
T-Way Drive	Deyell Line	End
Carmel Crescent	County Rd. 10	End
Zion Line	County Rd. 28	County Road 10
Sharpe Line	Highway 7	Howden ¼ Line
Cathcart Crescent	Stewart Line	Highway 7
Deyell Line	County Road 10	Hutchison Drive
Bland Line	County Road 10	Westerly limit
Jones ¼ Line	Bland Line	300 metres northerly
Syer Line	Tapley ¼ Line	100 metres west of the Municipal address 888 Syer Line
Carmel Line	County Rd. 10	100 metres east of County Rd. 28.
Howden ¼ Line	Stewart Line	Sharpe Line
Morton Line	County Road 10	500 metres westerly of Highway 7

Schedule "J"

Heavy Vehicles Restricted

Road	Section	Restricted Hours
Cathcart Cr.	From Stewart Line to Highway 7	At all times
Dobbin Road	From limits of City of Peterborough to Dobbin Road south	At all times
Elmdale Road	From Brown Line to South entrance to Sysco Food Terminal	At all times
Whittington Dr.	From limits of City of Peterborough west to Dobbin	At all times
Whitfield Road	Bartlett Road/Whitfield Landing Intersection to the east end	At all times
Brown Line	From Hwy. 7 to Airport Road	At all times
Preston Road	Maple Grove Road to Stewart Line	At all times
Brown Line	Hwy 7 to Airport Road	At all times
Davis Road 1.4 km Northbound	From Stewart Line	At all times
Preston Road	Maple Grove Road to Stewart Line	At all times
Brown Line	Hwy 7 to Airport Road	At all times
Whittington Drive	East of 2085 Whittington Drive to End	At all Times

Schedule “K”

No Parking

When properly worded signs have been erected and are on display, no person shall park a vehicle on the street identified except as permitted herein;

Highway	From	To
Brookside Street	Tupper Street North Side – January 1 – June 30 South Side – July 1 – December 31	400 metres west of Tupper Street
Brookside Street	Driveway of 97 Brookside Street	6 metres East of Driveway at Brookside Street
Cedar Crescent	Hutchinson Drive	End of Cedar Crescent on the South East side



Regular Council Meeting

To:	Mayor and Council
Date:	December 18, 2023
From:	Cindy Page, Clerk
Report Number:	Corporate Services 2023-13
Subject:	Cavan Monaghan Accessibility Advisory Committee Update

Recommendation:

That Council receive Report Corporate Services 2023-13 Cavan Monaghan Accessibility Advisory Committee Update for information.

Overview:

At the Regular Council Meeting of Council on October 16, 2023 Council approved the establishment of the Cavan Monaghan Accessibility Advisory Committee.

Staff advertised to establish the Committee and fill the vacancies, one of the legislative requirements is that the majority of the Committee members are persons with disabilities. To date Staff have not received enough applications that will fulfill this requirement.

Staff have sought legal advice on the applications and legislative requirements, the recommendation is to continue to try to recruit and outreach to seek members, the members do not need to be a resident of the municipality.

Staff have reached out to the Joint Accessibility Advisory Committee's to see if any of their members may want to join our Committee and we will continue to do our best efforts to recruit members to fulfill the legislative requirement.

Financial Impact:

None at this time.

Respectfully submitted by,

Reviewed by,

Cindy Page
Clerk

Yvette Hurley
Chief Administrative Officer



Regular Council Meeting

To:	Mayor and Council
Date:	December 18, 2023
From:	Yvette Hurley, C.A.O. and Karlie Cornish-Tkalec, Deputy Clerk
Report Number:	C.A.O. 2023-07
Subject:	Community Safety and Well-being Plan Update

Recommendations:

1. That Council receive Report C.A.O 2023-07 Community Safety and Well-being Plan Update for information; and
2. That Council receive the Community Safety and Well-being Plan Update for information.

Overview:

On June 20, 2022, Council adopted a joint Community Safety and Well-being Plan with the Townships of Asphodel-Norwood and Otonabee-South Monaghan.

As noted in the plan, implementation and priorities are unique to each Township; but the purpose of this annual report is to highlight Cavan Monaghan’s accomplishments with respect to the plans 4 key priorities:

- Access to Health
- Community Belonging
- Community Supports
- Housing Security

The Community Safety and Well-being Plan provides the framework for promoting safety and well-being while setting local priorities and establishing framework for decision-making. While many of the identified priority areas are outside the scope of municipalities, this Plan makes recommendations on ways to improve access, build upon supports, and strengthen connections. Addressing complex social issues requires action from all levels of government.

Financial Impact:

No financial impact at this time.

Attachments:

Attachment No. 1: Community Safety and Well-being Plan Update December 2023

Attachment No. 2: Report C.A.O 2022-07 Community Safety and Well-being Plan

Attachment No. 3: Letter from Solicitor General Dated October 3, 2022

Respectfully Submitted by,

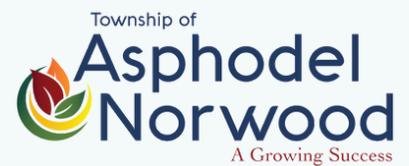
Reviewed by,

Karlie Cornish-Tkalec
Deputy Clerk/Corporate Services Administrator

Yvette Hurley
Chief Administrative Officer

Community Safety and Well-being (CSWB) Plan

Update

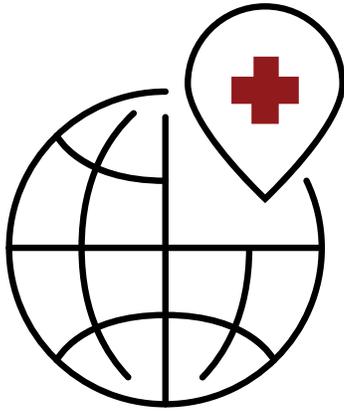


December
2023

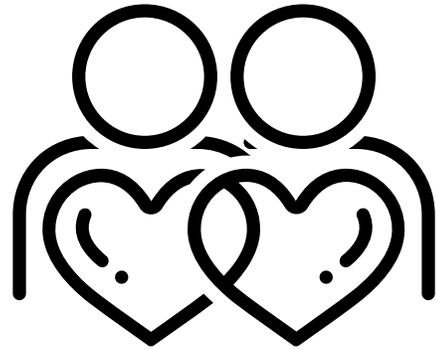
Key Priorities

Based on public consultation, regional data, and advice from the Advisory Committee, the following four key priority areas were identified:

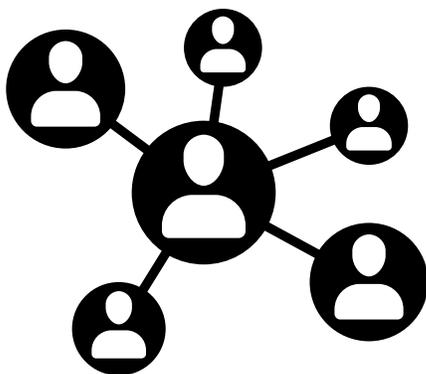
Access
to Health



Community
Belonging



Community
Supports



Housing
Security



Our Priorities

Access to Health



Goal

Improve access to mental and physical health supports.

Supporting Actions to-date

- Lobbied in conjunction with Asphodel-Norwood, Otonabee-South Monaghan, and other lower tier municipalities within Peterborough County for an area Physician Recruiter
- Entered into an Intent to Lease agreement for the new paramedic location as part of the new fire hall project
- Provided space to Peterborough Public Health Unit to host clinics for members of the public in the Cavan Monaghan Community Centre
- Vision 2035 - Strategic Plan for Parks and Recreation to ensure a focus of physical health opportunities and programming
- Where appropriate, seek opportunities to have future development proposals include possible health services

Our Priorities

Community Belonging



Goal

Enhance community engagement and sense of connection.

Supporting Actions to-date

- Continual support of community programming and partnerships with the provision of municipal facility space (CM Libraries, EarlyON Family Centre, Millbrook Food Share, Community Policing)
- Provided ongoing public engagement occasions through surveys and Public Information Centres (PICs)
- Focus groups and community forums were held throughout the Parks and Recreation Plan update
- Encouraged community volunteerism with Township appointed Boards and Committees, including the formation of two new committees: Sustainability Advisory Committee and Accessibility Advisory Committee
- Millbrook Valley Trails Advisory Committee hosted workdays for trail enhancements and partnered with Invasive Species Centre for student education and volunteerism
- Updating the Townships Communications and Social Media Policy to enhance community engagement and sense of connection
- Promote volunteer opportunities through a variety of media such as the Townships Website, Social Media Platforms and the local paper
- Township staff attended local meetings, engagement sessions and discussions with citizens and special interest groups

Our Priorities

Community Supports



Goal Improve access to community support services and programs.

Supporting Actions to-date

- Ongoing communications with community user groups to identify needs and areas for improvement
- Publication consultation including surveys and focus groups for an updated Parks and Recreation Plan
- Vision 2035 - Strategic Plan for Parks and Recreation Phase 1 and Phase 2 completed in 2023
- Encouraging user groups to utilize the Township's Community Calendar for upcoming event support and promotion
- Promoted services and programs during development pre-consultations and meetings with developers and community members
- Cavan Monaghan Fire Department hosted a variety Public Safety, Fire Prevention and Education events throughout the Township
- Council supported the addition of a School Crossing Guard at Sherbrooke Street pedestrian crossing to ensure Public and Road safety
- Supported joint efforts and initiatives between Peterborough Police Services, Cavan Monaghan Community Policing and Ontario Provincial Police Services

Our Priorities

Housing Security



Goal

Increase access to affordable, safe, and adequate housing.

Supporting Actions to-date

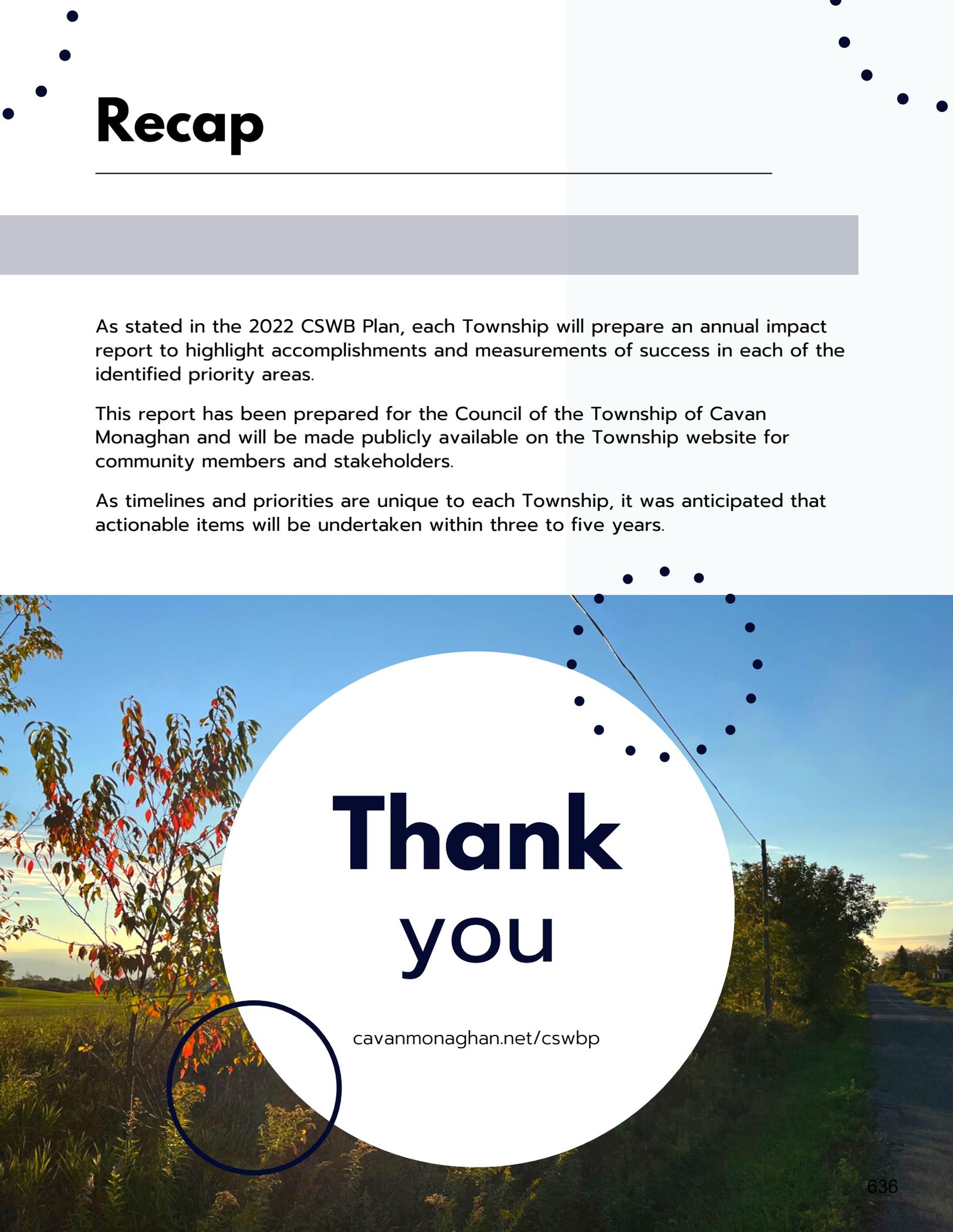
- Continue to support and working with the County of Peterborough and City of Peterborough on implementation of the 10-year Housing and Homelessness Plan
- Secured a commitment for the construction of affordable housing units as part of a Ministers Zoning Order for development in Millbrook
- Continue to promote and seek opportunities for any proposed residential development to provide a range of housing options for current and future Township residents
- Townships Official Plan and Zoning By-law promotes affordable housing (For example permitting secondary dwellings)
- Continue to support and promote County of Peterborough tax relief for seniors and low-income persons with disabilities
- Advocated for Sanitary and Water Infrastructure Funding to support growth and maintenance including seeking alternate funding opportunities i.e. Grants

Recap

As stated in the 2022 CSWB Plan, each Township will prepare an annual impact report to highlight accomplishments and measurements of success in each of the identified priority areas.

This report has been prepared for the Council of the Township of Cavan Monaghan and will be made publicly available on the Township website for community members and stakeholders.

As timelines and priorities are unique to each Township, it was anticipated that actionable items will be undertaken within three to five years.



Thank you

cavanmonaghan.net/cswbp



Regular Council Meeting

To:	Mayor and Council
Date:	June 20, 2022
From:	Yvette Hurley, C.A.O. and Karlie Cornish-Tkalec, Deputy Clerk
Report Number:	C.A.O. 2022-07
Subject:	Community Safety and Well-being Plan

Recommendations:

1. That Council receive Report C.A.O 2022-07 Community Safety and Well-being Plan for information; and
2. That the Council of the Township of Cavan Monaghan adopt the Community Safety and Well-being Plan (Attachment No. 1); and
3. That the Council of the Township of Cavan Monaghan direct staff to submit the Community Safety and Well-being Plan to the Office of the Solicitor General to notify of the completion of the Plan.

Overview:

Staff provided an update to the Council of the Township of Cavan Monaghan on February 7, 2022 Report C.A.O. 2022-01 Update on the Community Safety and Well-being Plan (Attachment No. 2) notifying Council of the joint partnership with the Township Asphodel-Norwood and Otonabee-South Monaghan to complete the Plan before the Provincial deadline of July 1, 2022.

Municipalities of Cavan Monaghan, Asphodel-Norwood and Otonabee-South Monaghan quickly mobilized to create a Community Safety and Well-being Plan coordinating team for administration of the Plan, establish a multi-sectoral Advisory Committee, and complete public consultation.

Upon review of the public consultation summary, the Advisory Committee provided advice and clear direction in prioritizing the following areas (in alphabetical order):

- **Access to Health** (this includes doctor recruitment, mental wellness, and physical health supports)
- **Community Belonging**

- **Community Supports** (this encompasses senior, family, and youth supports)
- **Housing Security**

The coordinating team prepared a draft CSWB Plan for the Advisory Committee to review and provide feedback, incorporated comments received, and made the appropriate revisions. This CSWB Plan recognizes the role municipalities play and seeks to improve, enhance, or increase access for each of the identified priorities in a supportive capacity.

The Community Safety and Well-being Plan provides the framework for promoting safety and well-being while setting local priorities and establishing framework for decision-making. While many of the identified priority areas are outside the scope of municipalities, this Plan makes recommendations on ways to improve access, build upon supports, and strengthen connections. Addressing complex social issues requires action from all levels of government.

On Tuesday, June 14, 2022 the final CSWB Plan was presented to the Council of Asphodel-Norwood and passed the following resolution:

THAT the Council of the Township of Asphodel-Norwood accepts this report regarding the Community Safety and Well-being Plan for information; AND FURTHER THAT the Council of the Township of Asphodel-Norwood adopts the Community Safety and Well-being Plan as presented; AND FURTHER THAT the Council of the Township of Asphodel-Norwood directs staff to submit the Community Safety and Well-being plan to the Office of the Solicitor General upon adoption by the Council of the Township of Cavan Monaghan and the Council of Township of Otonabee-South Monaghan on June 20, 2022.

The final Plan is scheduled to be presented to the Council of Otonabee-South Monaghan on the same date as Cavan Monaghan, Monday, June 20, 2022.

Financial Impact:

No financial impact at this time.

Attachments:

- Attachment No. 1: Community Safety and Well-being Plan
- Attachment No. 2: Report C.A.O 2022-01 Update on the Community Safety and Well-being Plan

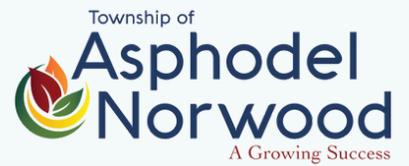
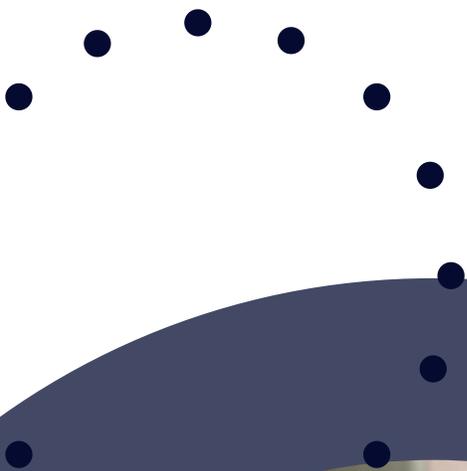
Respectfully Submitted by,

Reviewed by,

Karlie Cornish-Tkalec
Deputy Clerk/Corporate Services Administrator

Yvette Hurley
Chief Administrative Officer

Community Safety & Well-being Plan



2022

Index

CSWBP · 2022

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Joint Mayor's Message

On behalf of the members of Council from the Township of Asphodel-Norwood, the Township of Cavan Monaghan, and the Township of Otonabee-South Monaghan, we are pleased to present the Townships' joint Community Safety and Well-being (CSWB) Plan.

An important municipal government responsibility is the safety, health and wellness of our residents. This Plan is about working collectively to develop fair and equitable responses to the emerging issues within our respective communities to help ensure that all residents enjoy the opportunity to feel safe and connected; while recognizing that not all residents experience the same sense of safety and well-being and the struggles are unique to each individual.

This joint CSWB Plan allows us to be responsive, adapt to the needs of our residents, and use data to make evidence-based decisions. We need to consider new ways of confronting the complex challenges facing our communities and rethink the ways in which we deliver services to meet the needs of our residents. The goal of this Plan is to achieve greater organization coordination and collaboration on issues and situations before they escalate. It is extremely important to continue to build and strengthen partnerships across sectors and we thank our community partners for coming together and assisting with the development of this Plan.

We have every confidence that together, we can improve safety and well-being for everyone; and look forward to working collaboratively alongside the community to accomplish our shared goals and keep our residents safe and thriving.



**Mayor
Bonneau**
Asphodel-Norwood



**Mayor
McFadden**
Cavan Monaghan



**Mayor
Taylor**
Otonabee-South
Monaghan

Rodger Bonneau
Rodger Bonneau

Joe Taylor
Joe Taylor

Scott McFadden
Scott McFadden

Advisory Committee

Members

Special thanks to our Advisory Committee members for their support, ongoing commitment, and dedication to this Plan.

Deputy Mayor Lori Burt

Diane Anderson Campbell

Chief Carr

Deputy Mayor Bonnie Clark

Rosemary Davidson

Carolyn Doris

Christopher Galeazza

Deputy Mayor Matthew Graham

Jamie Hartnett

Nancy Hurley

Anglela Lloyd

Karen Morton

Fire Chief Chuck Parsons

Emmanuel Pinto

Sharon Simpkins

Jack Veitch

Rev. Nancy Wilson

Township of Asphodel-Norwood

Asphodel-Norwood Ministerial Food Bank

Hiawatha First Nation

Township of Otonabee-South Monaghan

Community Care Norwood

Peterborough Public Health

Ontario Provincial Police - Peterborough County Det.

Township of Cavan Monaghan

Peterborough Police Service

EarlyON and Family Centre

Kawartha Pine Ridge District School Board

Community Care Millbrook

Township of Otonabee-South Monaghan

Peterborough Victoria Northumberland Catholic
Clarington District School Board

Otonabee-South Monaghan Food Cupboard

Canadian Mental Health Association
Haliburton, Kawartha, Pine Ridge

Keene and Hiawatha United Churches

Land Acknowledgement

This Plan recognizes and supports First Nations communities and the organizations that exist to support the work they are doing every day to improve safety and well-being.

In recognition of the longstanding history of the land that we reside on and the work this Plan will be undertaken on, we offer this land acknowledgement.

We would like to begin by acknowledging the Townships of Asphodel-Norwood, Cavan Monaghan, and Otonabee-South Monaghan are located on the traditional territory of the Michi Saagiig Peoples. These are Treaty 20 and Williams Treaties lands.

We encourage everyone to educate themselves on the details of these documents and the influence of First Nations in Canada's history.

Our respective Township Councils recognize these contributions and commit to actions which demonstrate respect for the environment and in keeping with First Nation tradition, reflects the security of the next seven generations.

To further recognize our commitment to reconciliation, this Plan acknowledges and respects the right to Indigenous Planning and governance of Indigenous Peoples. Although there is a lot to mend, a culture of mutual respect, engagement, dialogue, and support will steer our collaboration as we work to improve the lives of those in our respective communities.

We support and respect the Indigenous Peoples' rights to self-determination, planning process and outcomes. We commit to working closely with Indigenous partners and open ourselves to the exchange of knowledge and skills that will complement our joint efforts to support Safety and Well-being in our communities.

Introduction

In January 2019, new requirements for Community Safety and Well-being (CSWB) planning came into force. The Police Services Act, 1990 (PSA) was amended, and municipalities across Ontario were given time to develop and adopt a CSWB plan. As part of the legislation, municipalities were required to develop and adopt a CSWB Plan in partnership with stakeholders and community groups.

A CSWB Plan is a tool to address key social priorities for safety and well-being achieved through multi-sectoral partnerships working together towards sustainable communities where everyone feels safe, has a sense of belonging, and opportunities to participate; and also where individuals and families are able to meet their needs for education, health care, food, housing, income, and social and cultural expression.

The global COVID-19 pandemic and the provincial state of emergency declared in March 2020 significantly affected communities in Asphodel-Norwood, Cavan Monaghan, and Otonabee-South Monaghan. The contents of this Plan reflects the impact of COVID-19 and represents the partnership between our municipalities.

Exploring options to address risks through the Ontario CSWB planning framework and taking into consideration factors critical to success; this Plan recognizes the great work already happening within our region, and seeks to do more with collaboration and promotion of local experience and expertise.

Critical Success Factors



The CSWB Planning Framework

The Ministry of the Solicitor General created a framework to help support the development of each CSWB Plan.

As a long term strategy to make safety and well-being a reality for vulnerable individuals, families, groups, and locations, this Plan includes strategies at four levels of intervention:

1. **Social Development** · Promoting and maintaining community safety and well-being
2. **Prevention** · Reducing identified risks
3. **Risk Intervention** · Mitigating elevated risk situations
4. **Incident Response** · Immediate response to urgent incidents



1. Social Development

Promoting and maintaining community safety and well-being by bringing together a wide range of sectors, agencies, and organizations to address complex social issues from every angle.

2. Prevention

Proactively reducing identified risks by implementing evidence-based situational measures, policies or programs to reduce locally identified priority risks before they result in crime, victimization and/or harm.

3. Risk Intervention

Mitigating situations of elevated risk by multiple sectors working together to address situations where there is an elevated risk of harm and stopping something bad from happening right before it is about to happen to reduce the need for and systemic reliance on incident response.

4. Incident Response

Critical and non-critical incident response, or what is traditionally thought of as crime and safety; that includes immediate and reactionary responses involving a sense of urgency such as police, fire, emergency medical services, and child welfare organizations.



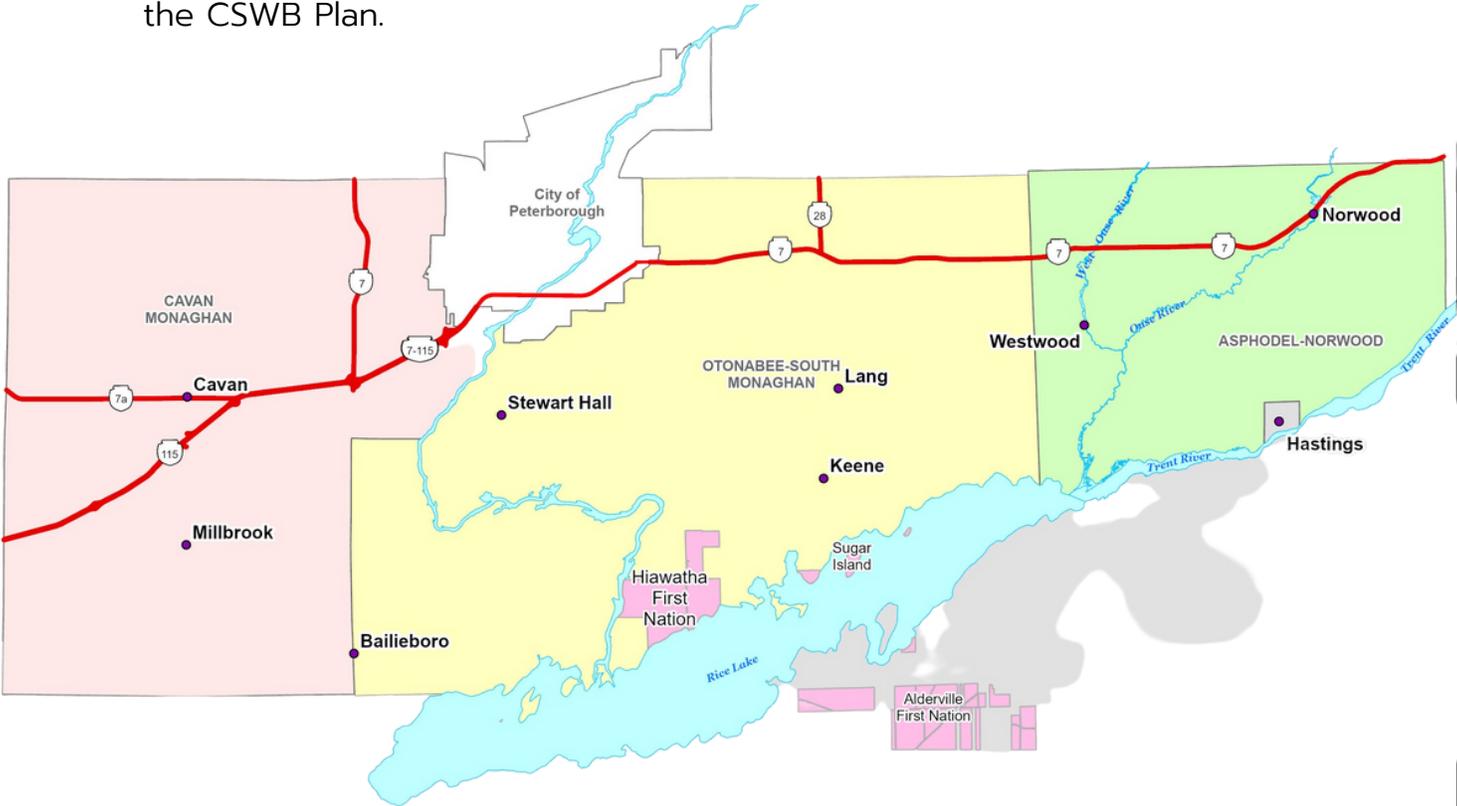
Our Connection

Asphodel-Norwood Cavan Monaghan Otonabee-South Monaghan

The Townships of Asphodel-Norwood, Cavan Monaghan, and Otonabee-South Monaghan are located along the Southern border of Peterborough County and connected by the Trans Canada Highway.

Sharing similarities in growth patterns, agricultural pursuits, and local amenities, our municipalities formed a partnership to create and maintain community safety and well-being through the formation of a local CSWB Plan.

This partnership formed to research, engage, and implement said Plan will be sustained through the actionable items identified. Our connection will benefit all residents regardless of their needs or demographics. This joint Plan respects the province's direction to adopt a regional approach to the CSWB Plan.



About Our Townships

*Asphodel-
Norwood*

Pop. 4,658

The Township of Asphodel-Norwood (AN) is a growing rural community that provides an attractive blend of rural, village, and cottage living to over 4,500 residents who call the municipality home.

Nestled within 160 square kilometres of southern Peterborough County, Asphodel-Norwood boasts the charming and historic villages of Norwood and Westwood.

The Township encompasses a good selection of schools, a NHL sized ice surface with an enthusiastic hockey and figure skating community, thriving community groups, picturesque parks including a new splash pad, and popular resorts along the Trent River. All of this combined with the renowned Norwood Fall Fair each Thanksgiving weekend makes Asphodel-Norwood a growing success!



About Our Townships

*Cavan
Monaghan*

Pop. 10,016

The Township of Cavan Monaghan (CM) is a rural area which covers an area of approximately 306 km², and includes several small hamlets and villages including Bailieboro, Cavan, Fraserville, Ida, Mount Pleasant, Springville, Five Mile Turn, and the Historical Village of Millbrook.

It is expected that the population in the hamlets and villages will continue to increase, resulting in an increased demand for recreational opportunities. Current land use includes agricultural, employment, rural residential, villages and hamlets, and natural areas.

The Township is located approximately 20 km south west of the City of Peterborough, in Peterborough County.

Cavan Monaghan is a strong, sustainable rural community. We celebrate, protect, and promote our unique history and natural heritage, and value the contribution and interests of all ratepayers in building a prosperous future.



About Our Townships

*Otonabee
South-
Monaghan*

Pop. 7,087

The Township of Otonabee-South Monaghan (OSM) is a lower tier Township located in southern portion of the County of Peterborough with an approximate population of 7,000 residents.

Otonabee-South Monaghan is predominantly agricultural community with a number of hamlets, the largest of which is the Village of Keene. The Highway 7 corridor runs through the northern portion of the municipality, affording opportunities for commercial and employment-related development.

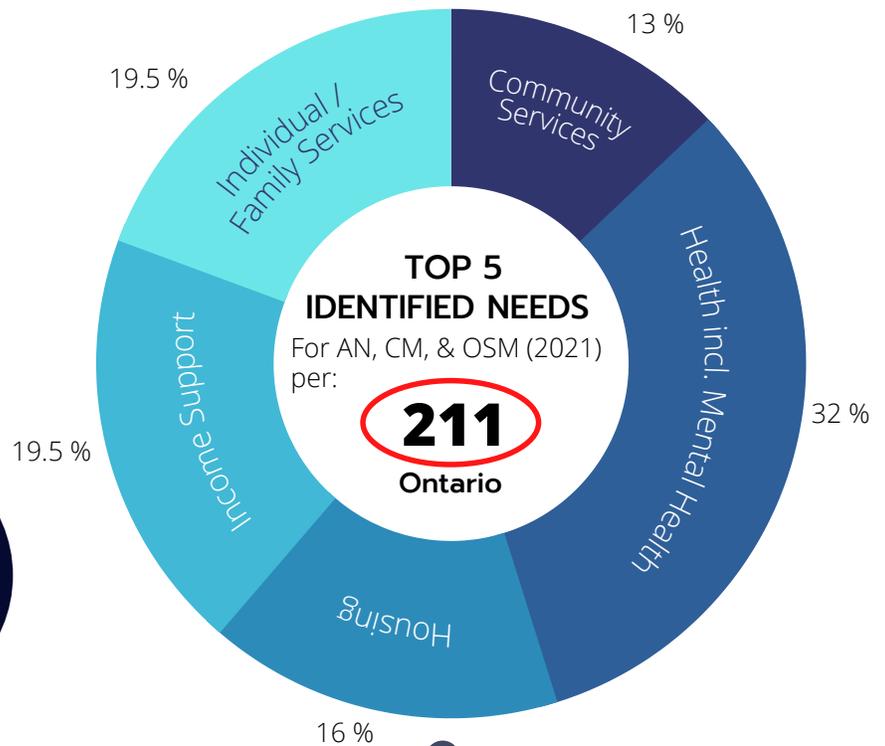
The Trent-Severn waterway through the heart of the Township along the Otonabee River and then through Rice Lake, which is the Township's southern boundary. There are numerous resorts and cottages located along this waterfront.



Fast Facts

Our Priorities

Approximately **11,000** people in the Peterborough area are without a family physician

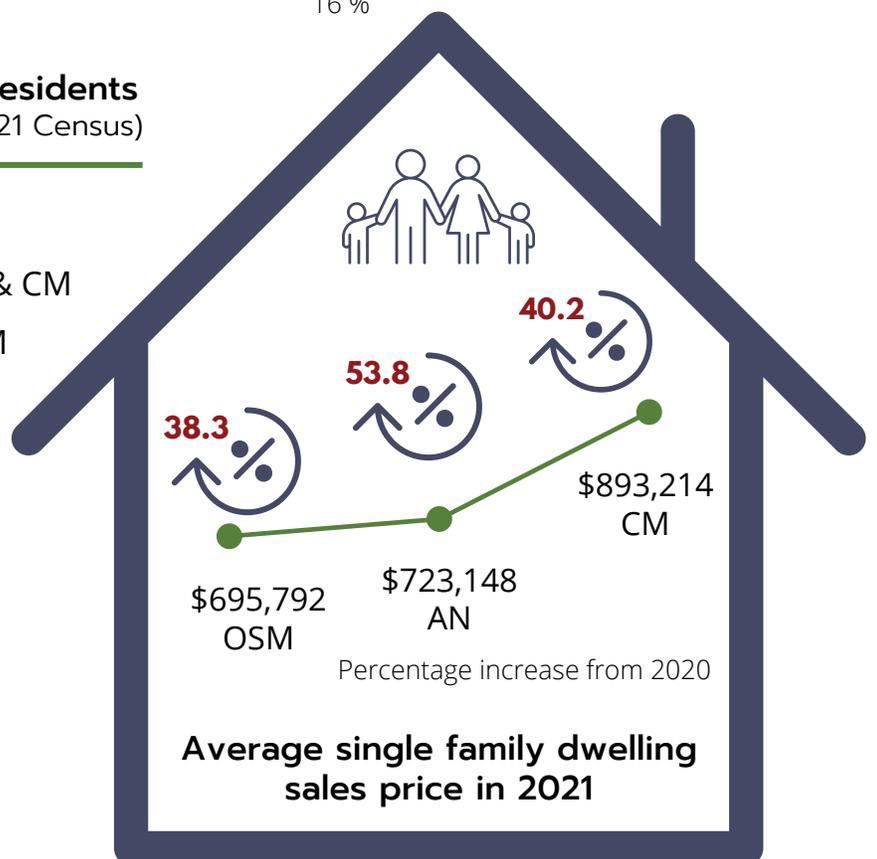



44

Average age of residents (2021 Census)



13.4% AN & CM
6.3% OSM



(See References Page)

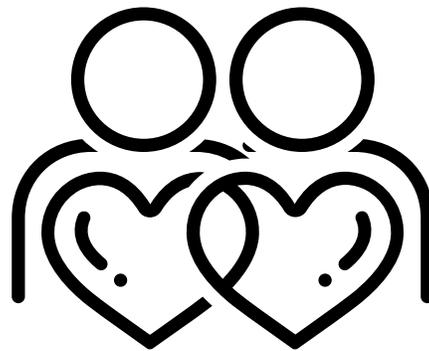
Key Priorities

Based on public consultation, regional data, and advice from the Advisory Committee, the following four key priority areas have been identified:

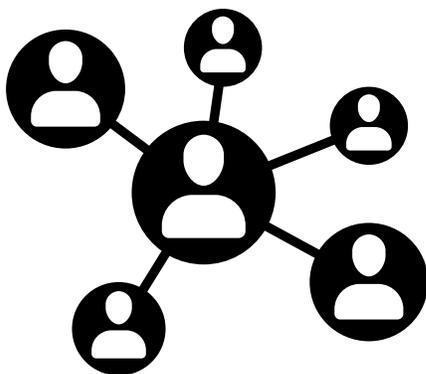
Access
to Health



Community
Belonging



Community
Supports



Housing
Security





Goal

Improve access to mental and physical health supports.

Supporting Actions

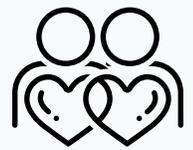
- Liaise with the Peterborough Physician Recruitment and Retention Committee to stay informed of ongoing efforts for physician recruitment for unattached patients in the region
- Advocate for expanded health care services including health care providers and facility upgrades (i.e. New Medical Centre)
- Support and advocate for expansion and sustainability of the Family Health Team structure in each Township
- Advocate for a consistent transportation source for residents to access medical services in the City of Peterborough
- Work with the relevant agencies on informative communication plans to support those struggling with mental health and/or addictions and their familial supports
- Provide private space for residents to access internet for virtual medical appointments
- Promote the TALK NOW Mental Health & Addictions clinic
- Ensure no municipal barriers are in place for physical health opportunities
- Support and encourage rural outreach for the Canadian Mental Health Association's new Mobile Mental Health and Addictions Clinic
- Continued promotion of crisis line services and supports
- Update or Adopt Master Recreation Plan to ensure a focus on physical health opportunities and programming

Indicators of Success

- Number of unattached patients seeking care
- Regular rural attendance of the mobile mental health and addictions clinic
- Number of mental health calls for service from Police Services Boards
- Number of Ontario 211 Health and Mental Health/Addictions needs
- Support for Master Recreation Plan initiatives in annual municipal budgets

Our Priorities

Community Belonging



Goal

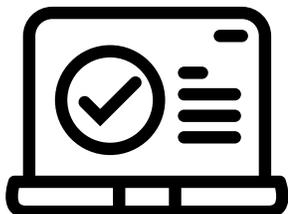
Enhance community engagement and sense of connection.

Supporting Actions

- Establish or support existing community hubs that act as an access point and make it easier for residents to access the health, social, cultural, recreational, educational, and any other resources they may need in one spot
- Launch a community education campaign on local programs and services available (i.e. 211 Ontario, Connex Ontario)
- Collaborate with community partners, user groups, and public libraries for social inclusion opportunities
- Support, enhance, and promote community initiatives and programming for all demographics
- Provide ongoing public engagement occasions
- Encourage community volunteerism and participation

Indicators of Success

- Number of Ontario 211 Community Services needs and closed loop referrals
- Number of community events and corresponding resident engagement
- Community Care metrics
- Community Hub metrics



Community Care Peterborough provided a total of 44,375 reassurance calls and visits in 2020 / 2021.

Our Priorities

Community Supports



Goal

Improve access to community support services and programs.

Supporting Actions

- Identify community support services and programs that are available
- Identify areas of opportunity or improvement for services and programs
- Improve accessibility and access to support services and programs within the community
- Advocate for a consistent transportation source for residents to access local and surrounding amenities and social opportunities
- Research the possibility of establishing a mechanism to distribute free personal hygiene kits for individuals in need
- Continue to work collaboratively to build long lasting relationships with community partners and organizations

Indicators of Success

- Increase in use and participation of community services and programming
- Strengthened connections to support providers and resources for the community
- Working collaboratively to create a more streamlined system which could include data sharing, communications, and service delivery



23.3% of Peterborough area children were considered vulnerable in the physical health and well-being domain.

Peterborough Social Services · Unstructured Outdoor Play report (2018)

Our Priorities

Housing Security



Goal

Increase access to affordable, safe, and adequate housing.

Supporting Actions

- Work with community partners to support the vision identified in the Peterborough Housing and Homelessness Plan (2019)
- Promote supports available through Peterborough Social Services and Ontario 211
- Advocate for diverse and innovative housing options
- Ensure no municipal barriers are in place to support responsible growth
- Improve service navigation
- Promote secondary dwelling unit legislation (More Homes, More Choices Act, 2019)
- Explore opportunities to support diverse housing options (i.e. tiny homes, multi-residential units)

Indicators of Success

- Number of applications on the Community Housing Wait List
- Number of people on the By-Name Priority List (BNPL)
- Number of Ontario 211 Housing needs and closed loop referrals
- Number of building permit applications and municipal turn-around times
- Number of planning applications and municipal turn-around times



As of February 2020, there were 1,384 applicants on the waitlist for Social Housing in Peterborough City and County.

Final Thoughts

Implementation

Each Township will prepare an annual impact report highlighting accomplishments and measurements of success in each of the identified priority areas.

This report will be provided to respective Councils and made publicly available on each Township website for community members and stakeholders.

Timelines and priorities will be unique to each Township, but actionable items are anticipated to be undertaken within 3 - 5 years.

Conclusion

This CSWB Plan lays the groundwork for our municipalities to work together in a coordinated approach to promote safety and well-being for all residents in our communities. Building upon existing municipal partnerships and assets, this Plan endeavours to improve access to health, community supports, and adequate housing; while also enhancing a sense of belonging and connection.

This Plan has been built upon a strong foundation of data and local information, acknowledges service gaps and challenges, and takes supportive action in the pursuit of corrective goal achievement and/or progress.

It is important to note that this Plan recognizes many of the identified key priority areas lie outside the scope of local governments and would require a substantial infusion of funding to enact meaningful change; but addressing complex social issues requires innovation, adaptability, and proactivity from all levels of government to create safer and healthier communities. We, along with our community partners will aspire to make strides in goal realization in a supportive capacity through collaborative outreach, educational campaigns, and existing services promotion.

Community Partners/ Resources

211 Ontario
2-1-1
www.211ontario.ca

Age Friendly Peterborough
705-748-8830 ext. 3227
www.peterborough.ca/aging

Asphodel-Norwood Food Bank
705-639-1777

Asphodel-Norwood Public Libraries
705-639-2228 / 705-768-2548
www.anpl.org

The Brock Mission & Cameron House
705-748-4766
www.brockmission.ca

Canada Mortgage & Housing Corp.
1-800-668-2642
www.cmhc-schl.gc.ca

**Canadian Mental Health Association –
Haliburton, Kawartha, Pine Ridge Br.**
705-748-6687
www.cmhahkpr.ca

Cavan Monaghan Libraries
705-741-1253 / 705-932-2919
www.cavanmonaghanlibraries.ca

Centre for Addictions & Mental Health
1-800-463-6273
www.camh.ca

Children's Aid Society
705-743-9751
www.khcas.on.ca

Community Care
(705) 742-7067
www.commcareptbo.org

ConnexOntario
1-866-531-2600
Text CONNEX to 247247
www.connexontario.ca

Elder Abuse Prevention Ontario
416-916-6728
www.eapon.ca

Employment Planning & Counselling
705-748-9110
www.epcjobs.ca

Five Counties Children's Centre
705-748-2337
www.fivecounties.on.ca

FourCast Addiction Services
1-800-461-1909
www.fourcast.ca

Four County Crisis Line
705-745-6484

Good Doctors Medical Clinic
1-855-884-6638
www.gooddoctors.ca

Health Care Connect
1-800-445-1822
www.ontario.ca/healthcareconnect

Housing Resource Centre
705-743-2272
www.ccrcc-ptbo.com/

Kawartha Sexual Assault Centre
705-741-0260
www.kawarthasexualassaultcentre.com

Community Partners/ Resources

Kids Help Phone

Text CONNECT to 686868
1-800-668-6868
www.kidshelpphone.ca

Millbrook Foodshare

705-932-7066

New Canadians Centre

705-743-0882
www.nccpeterborough.ca

ON Central East LHIN

705-743-2212
www.healthcareathome.ca/centraleast

Ontario Provincial Police – Peterborough Detachment

705-742-0401
www.opp.ca

Otonabee-South Monaghan Food Cupboard

705-295-6952

Otonabee-South Monaghan Public Libraries

705-295-6814 / 705-939-6510 /
705-749-5642
www.otosoumon.library.on.ca

Partners in Pregnancy

705-741-1191
www.partnersinpregnancy.ca

Pediatric Outpatient (POP) Clinic

705-740-8055

Peterborough Child and Family Centre

705-748-9144
ptbocfc.ca

Peterborough Drug Strategy

[www.peterboroughdrugstrategy.com/
resource/](http://www.peterboroughdrugstrategy.com/resource/)

Peterborough Family Health Team

705-740-8020
www.peterboroughfht.com

Peterborough Police Service

705-876-1122
www.peterboroughpolice.com

Peterborough Public Health

705-743-1000
www.peterboroughpublichealth.ca

Peterborough Social Services

705-748-8830
www.peterborough.ca/socialservices

Salvation Army

705-742-4391
www.mpeterborough.wpengine.com

Seniors Safety Line

1-866-299-1011

TALK NOW Mental Health and Addictions

705-876-5826

Telehealth (now Health Connect Ontario)

8-1-1 or Chat Online

Women's Healthcare Centre

705-743-4132

YES Shelter

705-748-3851
www.yesshelter.ca

YWCA

1-800-461-7656
www.ywcapeterborough.org/

References

Community Care Peterborough
Annual Report 2020-2021

Ministry of Municipal Affairs and Housing
More Homes, More Choice: Ontario's Housing Supply Action Plan 2019

Ministry of Community Safety and Correctional Services
Community safety and well-being planning framework Booklet 3 -
A shared commitment in Ontario

Ontario 211
<https://211ontario.ca/211-data/>

Peterborough and the Kawarthas Association of REALTORS® Inc.
<https://www.pkar.org/>

Peterborough Community Well-being Plan
2019

Peterborough Social Services
Unstructured Outdoor Nature Play Report (2018) - A solution-based report
of child development data in the City and County of Peterborough

PTBOCanada
<https://www.ptbocanada.com/journal/peterborough-plans-to-address-doctor-shortage-in-area-with-new-committee>

Statistics Canada
2021 Census

The Peterborough Examiner
<https://www.thepeterboroughexaminer.com/news/peterborough-region/2022/01/17/new-recruitment-committee-planned-to-address-doctor-shortage-in-peterborough.html>

Township of Asphodel-Norwood
Strategic Plan 2022-2024

Townships of Asphodel-Norwood, Cavan Monaghan, and Otonabee-South Monaghan

Community Safety and Well-being Plan

Public Survey Results · 218 Responses

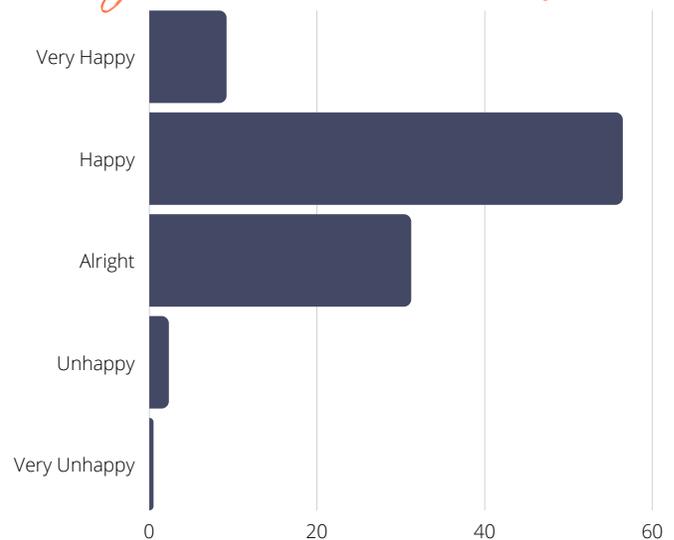
90.8%

of survey respondents reported feeling safe or very safe when asked about their feelings of personal safety.

Largest roles in community safety:
Neighbours, Police Services, Community Services, and Schools.



In general, respondents feel



What is a Community Safety and Well-Being Plan (CSWBP)?

A CSWBP is the result of when local governments, police, organizations, and residents discuss local issues and then commit to working together in new ways to create a safer, healthier communities. The intention for this plan is to redirect local efforts and investments from short-term, reactive, 'band-aid' responses to long-term, preventative, and risk mitigating social development.



Housing



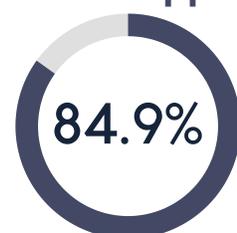
Respondents do not feel they have access to affordable housing

Income



Respondents reported total annual household incomes below \$75,000

Senior Supports



Respondents feel stronger senior supports are needed

Community Safety and Well-being Plan

Public Survey Results - Pg 2

April 2, 2022

Physical Health



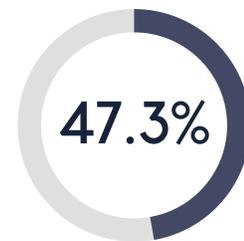
Respondents reported fair/poor physical health

Mental Health



Respondents reported fair/poor mental health

Community Belonging



Respondents do not feel a strong sense of community belonging

“ We need to look at the community as a whole and not individual groups such as seniors, youth. Someone is always being left out and unable to access services... ”

SURVEY RESPONDENT

Income



TOP 3 CONCERNS

1. Ability to pay bills and meet basic needs
2. Ability to enjoy life and participate in leisure activities
3. Affordable Housing

Health



OBSTACLES

80.7 % noted obstacles in receiving physical health supports; and 96% noted obstacles in receiving mental health supports

Primary Concerns: Access/ Availability of programming and health services (ie family physician)

Senior Supports



TOP 5 CONCERNS

1. Isolation
2. Caregiver Burnout
3. Affordable Housing
4. Access to Health Care
5. Transportator661

A sunset over a lake with a white circle containing the text "Thank you". The background shows a sunset over a lake with a wooden pier on the left. A white circle is centered over the sun, containing the text "Thank you" in a dark blue font. The bottom half of the image is a solid dark blue color with decorative white circles and dots.

Thank you

antownship.ca/cswbp
cavanmonaghan.net/cswbp
osmtownship.ca/cswbp



Regular Council Meeting

To:	Mayor and Council
Date:	February 7, 2022
From:	Yvette Hurley, C.A.O. and Karlie Cornish-Tkalec, Deputy Clerk
Report Number:	C.A.O. 2022-01
Subject:	Update on the Community Safety and Well-being Plan

Recommendation:

That Council receive Report C.A.O 2022-01 Update on the Community Safety and Well-being Plan for information.

Overview:

Community Safety and Well-being Plans are provincially legislated for municipalities under the Police Services Act, 1990. In 2018, the Province of Ontario, through the Ministry of the Solicitor General, amended the Police Services Act to mandate all municipalities to develop and adopt a Community Safety and Well-being Plan with a completion deadline of January 1, 2021.

In February 2020, the Township of Cavan Monaghan collaborated with the County of Peterborough, City of Peterborough, and the Townships of Asphodel-Norwood, Douro-Dummer, Havelock-Belmont-Methuen, North Kawartha, Otonabee-South Monaghan, Selwyn and the Municipality of Trent Lakes in a joint effort to develop a Community Safety and Well-being Plan.

Due to the significant impacts of COVID-19, in early 2020, on municipalities and key partners who needed to reallocate staff and resources towards the fight against COVID-19 it became clear the deadline of January 1, 2021 would be unattainable. Recognizing the impact COVID-19 had on municipalities the Ministry of the Solicitor General extended the deadline for municipalities from January 1, 2021 for an additional six months to July 1, 2021 as indicated in a letter from the Solicitor General dated June 3, 2021 (Attachment No. 1). Work on this plan did not resume until late 2020 with a shortened timeline left to complete the plan the Township and its partners moved forward to complete an Interim Plan by July 1, 2021 with a goal of submitting a complete plan by spring 2022.

On June 21, 2021 at the Regular Council meeting, an Interim Report for the Community Safety and Well-being Plan was presented to the Council of the Township of Cavan Monaghan. Council endorsed the Interim Report as presented along with the goal of completing a full plan in spring 2022 by passing the following motion:

R/21/06/21/02

That Council receive the presentation from Chris Kawalec, Community Development Program Manager, City of Peterborough regarding the Community Safety and Well-being Plan — Interim Report for information; and

Whereas municipalities are required under the Police Services Act, 1990 to adopt a Community Safety and Well-being Plan;

Whereas all local municipalities in the City and County of Peterborough are working with a multi-sectoral Advisory Committee to develop a Community Safety and Well-being Plan;

Therefore be it resolved that the Interim Report of the Community Safety and Well-being Plan be endorsed with the goal of completing a full plan in Spring 2022.

Following the submission of the Interim Plan the Township received a letter dated October 14, 2021 from the Ministry of the Solicitor General (Attachment No. 2). Requesting municipalities submit a completed plan. Included in the letter was a statement “under the Police Services Act, the Solicitor General has the power to enforce the CSWB planning requirements by appointing a CSWB planner to any municipalities that repeatedly and intentionally fail to complete a plan, at the municipality’s expense.” The Township continued to work towards completing the Community Safety and Well-being Plan with its partners with the target of completion being spring 2022.

On December 6, 2021 the City of Peterborough received Report CSD21-016 Community Safety and Well-being Plan Update (Attachment No. 3) changing the scope of work and targeted completion date from Spring 2022 to December 2022. Due to the change in scope and timeline proposed by the City of Peterborough, it was discussed at our CAO meetings, that some municipalities felt that we could come together and complete the plan before the end of the year. Township staff have collaborated with Asphodel-Norwood and Otonabee-South Monaghan to complete the plan. By collaborating with two alike Townships, the Township will be able to complete the Community Safety and Well-being Plan by spring 2022 and provide a more localized approach to address the needs of our community. The Deputy Clerks and C.A.O.s will be working together to ensure our local plan is submitted.

Financial Impact:

No financial impact at this time.

Attachments:

- Attachment No. 1: Solicitor General Letter Dated June 3, 2021
- Attachment No. 2: Solicitor General Letter Dated October 14, 2021
- Attachment No. 3: City of Peterborough Report CSD21-016
- Attachment No. 4: Solicitor General Letter Dated January 27, 2022

Respectfully Submitted by,

Reviewed by,

Karlie Cornish-Tkalec
Deputy Clerk/Corporate Services Administrator

Yvette Hurley
Chief Administrative Officer

Attachment No. 1

Solicitor General

Office of the Solicitor General

25 Grosvenor Street, 18th Floor
Toronto ON M7A 1Y6
Tel: 416 326-5000
Toll Free: 1-866-517-0571
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132-2021-541
By email

June 3, 2021

Yvette Hurley
Chief Administrative Officer
Township of Cavan Monaghan
988 County Road 10
Millbrook ON L0A 1G0
services@cavanmonaghan.net

Dear Yvette Hurley:

Thank you for your correspondence sent February 3, 2021, requesting that the Ministry of the Solicitor General extend the July 1, 2021 deadline for municipalities to submit their community safety and well-being (CSWB) plans.

Public safety is a top priority for this government. The ministry is committed to protecting the people of Ontario and keeping our communities safe and resilient. We recognize the important role police services, municipalities, and community partners have in working collaboratively to ensure the safety and well-being of Ontarians.

Our government appreciates that municipalities are currently facing unprecedented circumstances in their communities due to the on-going impact of COVID-19. We also understand that some municipalities may experience delays in their planning and engagement processes as a result of the pandemic.

As you know, the ministry recently extended the deadline for the completion and adoption of CSWB plans to July 1, 2021 to provide municipalities with an additional six months from the original deadline of January 1, 2021. This change will help to ensure municipalities, police services and local service providers can continue to dedicate the necessary capacity and resources to respond to COVID-19. In addition, it will also provide adequate time to effectively undertake consultations, work collaboratively with multi-sectoral partners, and meet the legislative requirements to develop meaningful and effective CSWB plans.

.../2

The ministry also offers a number of resources to support municipalities and their partners as they undertake the planning process. For example, the ministry has developed the [Community Safety and Well-Being Planning Framework: A Shared Commitment in Ontario](#) booklet, which includes the CSWB Planning Framework and a toolkit of practical guidance documents to assist communities as they develop and implement local CSWB plans. For your reference, the booklet and other ministry resources are available on the ministry's [website](#).

We will continue to look for ways to support our municipal partners to ensure they are able to meet their legislative requirements for CSWB planning. Where possible, municipalities are encouraged to explore alternative and innovative approaches to continue on-going planning efforts, such as through virtual engagement (e.g., webinars, teleconferences, online surveys, etc.).

I greatly appreciate your continued efforts as we move forward on this modernized approach to CSWB together. Through collaboration, we can work to build safer and stronger communities in Ontario.

Sincerely,

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

Sylvia Jones
Solicitor General

Attachment No. 2

Solicitor General

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132-2021-4188
By email

October 14, 2021

Dear Head of Council/Chief Administrative Officer/Municipal Clerk:

On behalf of the Ministry of the Solicitor General, I want to thank all municipalities, together with their multi-sectoral partners, that have taken steps towards developing, adopting and implementing their local community safety and well-being (CSWB) plans.

As you know, the ministry extended the deadline for the completion and adoption of CSWB plans to July 1, 2021, to provide municipalities with an additional six months from the original deadline of January 1, 2021. Since then, we have received an overwhelming response from municipalities regarding their CSWB planning progress. This includes the submission of completed and interim plans and status updates. To date, of the 372 municipalities required to prepare and adopt a CSWB plan, 95 per cent (356 municipalities) have plans that are completed or in progress.

The development and completion of these plans demonstrates municipal leadership and commitment to proactively addressing crime and complex social issues facing your communities. Municipalities are best positioned to work with local partners to develop effective community strategies and programs and create sustainable communities that respond to local needs and conditions.

At this time, we are encouraging municipalities who have not already done so, to please submit their completed CSWB plan or provide an update on their CSWB planning status to the ministry via the following email address: SOLGEN.Correspondence@ontario.ca. Additionally, as a reminder, municipalities are required to publish their completed plans online within 30 days of adoption.

As you may be aware, under the *Police Services Act*, the Solicitor General has the power to enforce the CSWB planning requirements by appointing a CSWB planner to any municipalities that repeatedly and intentionally fail to complete a plan, at the municipality's expense. However, our government recognizes that municipalities are currently facing unprecedented circumstances in their communities due to the on-going impact of COVID-19. We also understand that some municipalities may experience delays in their planning and engagement processes as a result of the pandemic.

.../2

Ministry staff will continue to look for ways to support our municipal partners to ensure they are able to meet their legislative requirements for CSWB planning. Where possible, municipalities are encouraged to explore alternative and innovative approaches to continue on-going planning efforts, such as through virtual engagement (e.g., webinars, teleconferences, online surveys, etc.).

Municipalities are also encouraged to continue to work with respective police services, local multi-sectoral partners, and community members on the development and implementation of local CSWB plans. Localized, community-driven collaboration remains key to the success of CSWB planning, given the focus on creating workable solutions that are grounded in and tailored to individual community needs and features.

If you have any questions about CSWB planning, please contact Shamitha Devakandan, Community Safety Analyst, Public Safety Division, at Shamitha.Devakandan@ontario.ca.

I greatly appreciate your continued efforts as we move forward on this modernized approach to CSWB together. It is by working together that we can truly build safer and stronger communities in Ontario.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sylvia Jones', with a stylized flourish at the end.

Sylvia Jones
Solicitor General



City of
Peterborough

To: Members of the General Committee

From: Sheldon Laidman, Commissioner, Community Services

Meeting Date: December 6, 2021

**Subject: Community Safety and Wellbeing Plan Update
Report CSD21-016**

Purpose

A Report to provide and update on the purpose and progress of the Community Safety and Well-being Plan project and to obtain Council approval to finance additional work for the project and extend the target deadline for completion.

Recommendations

That Council approve the recommendations outlined in Report CSD21-016, dated December 6, 2021 of the Commissioner of Community Services as follows:

- a) That Council increase the budget by \$50,000 from the original \$50,000 budget to finance the expansion of activities related to developing the Community Safety and Well Being Plan with the increase to be funded from the Social Services Reserve; and
- b) That Council endorse a change in the target deadline for completing the Community Safety and Well-being Plan from Spring 2022 to December 31, 2022.

Budget and Financial Implications

The current approved project cost of \$50,000 is being drawn from the Community Development Program, which is a 50/50 cost share between the City and County of Peterborough.

The recommended increase of \$50,000 can be accommodated within the uncommitted balance of \$6,061,831 available in the Social Services Reserve for the described works. While the Plan is a joint project with the County and its Townships, staff are recommending the additional funds be taken from the Social Services Reserve which is a City funded reserve as the rationale for the additional funding being necessary is to properly deal with City generated issues.

Background

Every municipality in the Province of Ontario is required to adopt a Community Safety and Well-being Plan (the Plan) as set out in the Police Services Act, through the Ministry of the Solicitor General. The Province has described the purpose of these plans as a tool for “taking an integrated approach to service delivery by working across a wide range of sectors, agencies and organizations to proactively develop and implement evidence-based strategies and programs to address local priorities related to crime and complex social issues on a sustainable basis.”

In February 2020, the City of Peterborough, County of Peterborough, and the 8 local Townships agreed to collaborate and create a single Plan for all local municipalities. The onset of the pandemic paused all progress on the Plan until late in 2020. In early 2021 a cross-sectoral Advisory Committee was established to lead the project. Membership of the Advisory Committee is found in Appendix A.

Report CSD21-007 resulted in Council adopting an Interim Community Safety and Well-being Plan to meet the Provincial deadline of July 1, 2021. Submitting the Interim Plan also demonstrated that the City was actively engaged in developing a full Plan. The County of Peterborough and all eight Township Councils also adopted the Interim Plan.

Project Status

The Advisory Committee has been meeting monthly since June 2021. Accomplishments to date include:

- a. Develop an Interim Community Safety and Well-being Plan.
- b. Undertake background research, asset mapping, and data collection.
- c. Prioritize 6 key risk factors for further investigation:
 - Poverty/Income
 - Mental Health
 - Addictions/Substance Use
 - Housing/Homelessness
 - Employment/Education
 - Transportation/Mobility

- d. Hire the local consulting firm of Arising Collective to assist with developing the Plan and associated consultations.
- e. Hosted six focus group sessions with local service providers in late November 2021 to develop possible options for addressing the above risk factors.

The next steps in the current process is for the Advisory Committee to examine the results of the November focus groups and further refine the priorities and possible actions. Community consultation is scheduled to take place in the winter through an online survey. Consultation sessions are to be scheduled in the Townships as well.

It is important to note that the business, education, and training communities have been engaged as part of our current process, including the involvement of: Peterborough Kawartha Economic Development, Downtown Business Improvement Area, Greater Peterborough Chamber of Commerce, Fleming College, Trent University, both Boards of Education, Skills Ontario, and Township Economic Development Officers.

Proposed Changes

The changes being proposed are a result of heightened awareness and severity of the risk factors being prioritized by the Plan, specifically: homelessness, poverty, addictions, and mental health of the community's most vulnerable populations. These risk factors have grown in prominence during the pandemic and have become the focus of discussions at Council. Council reconfirmed their commitment to address these issues at their October 25, 2021 meeting during the review of the Overflow Shelter at 210 Wolfe Street where the following individual motions were passed that are relevant to items that should be addressed through the Plan's development process:

- h) That a letter be sent on behalf of City Council to the Ministry of Health requesting that a drug detox centre be established in Peterborough.
- i) That City Council send a letter to the Police Services Board expressing their support for any efforts the Police Service Board is taking to deal with the concerns they have regarding Bill C-75 and if that includes a separate letter to the Provincial or Federal Government, that such be provided.
- j) That the MP, MPP and relevant agency representatives be invited to meet with the Mayor, Warden and city staff to discuss matters related to housing and homelessness and harm reduction.

The CSWB Plan is currently underway, and the primary purpose set out by the Province is to "take an integrated approach to service delivery by working across a wide range of sectors, agencies and organizations to proactively develop and implement evidence-based strategies and programs to address local priorities related to crime and complex social issues on a sustainable basis." This CSWB therefore should be the forum to address the complex issues currently being faced by the community as it already has strong representation from all community agencies. In order to make sure these important and complicated items are given proper consideration, take advantage of

work currently underway, and meet Council's expectations, the following changes to the scope of work and timing of the Plan are being proposed:

- a. Set a new completion target of December 31, 2022.
- b. Increase the project budget by \$50,000 to the already committed budget of \$50,000.
- c. Increase the consultation process by including additional focus group work with local service providers and development of "Action Tables" associated with identified risk factors, i.e., Addictions, Mental Health, Homelessness, etc.
- d. Increase the consultation process by engaging the public sooner, more frequently, and for a longer period of time.
- e. Host a round-table discussion with the MP, MPPs, Councillors, and service providers to discuss the local risk factors, as directed by City Council at the October 25, 2021 Council Meeting.
- f. Increase data collection and background research.
- g. Develop an implementation strategy.

The drawbacks of the current process being followed to develop the Plan are the limited budget and tight timeline for completion. Without making any changes, an adequate Plan can be developed to satisfy the Provincial requirements, however, the development of meaningful partnerships and collaborative actions to address local risk factors is less likely. The proposed changes will allow for more research, discussion and negotiation between services providers to develop creative strategies that target the prioritized risk factors.

Summary

A Community Safety and Well-being Plan is currently being developed that covers the City of Peterborough, County of Peterborough, and 8 local Townships to meet a legislative requirement set out by the Province of Ontario. The current process would be significantly improved with an expanded scope, extended target deadline, and increased budget to better address risk factors currently being faced by our community.

Submitted by,

Sheldon Laidman
Commissioner of Community Services

Contact Name:

Chris Kawalec
Community Development Program Manager

Phone: 705-748-8830 Ext. 3834
Toll Free: 1-855-738-3755
Fax: 705-876-4620
E-Mail: ckawalec@peterborough.ca

Attachments:

Appendix A: Advisory Committee Membership

Attachment No. 4

Solicitor General

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132-2021-2948

132-2021-3032

132-2021-3035

132-2021-3108

132-2021-4838

By email

January 27, 2022

Chris Kawalec
Community Development Program Manager
City of Peterborough
178 Charlotte Street
Peterborough ON K9J 2T8
ckawalec@peterborough.ca

Dear Chris Kawalec:

I acknowledge receipt of the submission of the interim community safety and well-being (CSWB) plan for the City of Peterborough and the County of Peterborough, including the eight Townships of Asphodel-Norwood, Cavan Monaghan, Douro-Dummer, Havelock-Belmont-Methuen, North Kawartha, Otonabee-South Monaghan, Selwyn, and the Municipality of Trent Lakes. I also confirm receipt of your email dated October 15, 2021, regarding the target completion date of spring 2022 for the full CSWB plan.

It is encouraging to hear of both the progress being made by the City of Peterborough and the County of Peterborough, and the collaborative approach that is being taken to develop a meaningful plan that meets the needs of your community. The interim report demonstrates the commitment to working with the public and community partners to determine local priority risks and strategies to address overall community safety and well-being.

The Ministry of the Solicitor General is committed to protecting the people of Ontario and keeping our communities safe and resilient. We recognize the important role police services, municipalities, and community partners have in working collaboratively to ensure the safety and well-being of Ontarians.

.../2

As you know, the ministry extended the deadline for the completion and adoption of CSWB plans to July 1, 2021, to provide municipalities with an additional six months from the original deadline of January 1, 2021. This change was made to help municipalities, police services and local service providers continue to dedicate the necessary capacity and resources to respond to the COVID-19 pandemic.

The ministry understands that municipalities are currently facing unprecedented circumstances in their communities due to the ongoing impact of the pandemic. Moreover, we understand that some municipalities may experience delays in their planning and engagement processes.

Ministry staff will continue to look for ways to support our municipal partners to ensure they are able to meet their legislative requirements for CSWB planning. Where possible, municipalities are encouraged to explore alternative and innovative approaches to continue on-going planning efforts, such as through virtual engagement (e.g., webinars, teleconferences, online surveys, etc.).

I appreciate your continued efforts to prepare the community safety and well-being plan for the City of Peterborough and the County of Peterborough.

Sincerely,



Sylvia Jones
Solicitor General

c: Susan Jackett
Administrative Assistant
Trent Lakes Fire Rescue
Municipality of Trent Lakes

Alana Solman, CMO, Dipl. M.A.
Chief Administrative Officer
Township of North Kawartha

Melanie Hudson
Administrative Assistant/Deputy Clerk
Township of Asphodel-Norwood

Solicitor General

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Sans frais : 1 866 517-0571
SOLGEN.Correspondence@ontario.ca



132-2022-2091
By email

October 3, 2022

His Worship Rodger Bonneau
Mayor
Township of Asphodel-Norwood
2357 County Road 45
Norwood ON K0L 2V0
rbonneau@antownship.ca

His Worship Scott McFadden
Mayor
Township of Cavan Monaghan
988 Peterborough County Rd 10
Millbrook ON L0A 1G0
mayor@cavanmonaghan.net

His Worship Joe Taylor
Mayor
Township of Otonabee-South Monaghan
20 Third Street
Keene ON K0L 2G0
jtaylor@osmtownship.ca

Dear Mayor Bonneau, Mayor McFadden and Mayor Taylor:

Thank you for completing the community safety and well-being (CSWB) plan for the Township of Asphodel-Norwood, Township of Cavan Monaghan and Township of Otonabee-South Monaghan. As Solicitor General of Ontario, I am pleased to respond.

Your [CSWB plan](#) demonstrates leadership and commitment to proactively addressing crime and complex social issues facing your communities. To this end, I would like to commend the joint efforts of the Township of Asphodel-Norwood, Township of Cavan Monaghan, Township of Otonabee-South Monaghan and your multi-sectoral partners for your collaborative efforts on the development of a comprehensive plan that will target local priority risks such as access to health, community belonging, housing security and community supports through the implementation of your identified programs and strategies. When we work together, we can truly build safer and healthier communities.

.../2

The positive impacts of CSWB planning are clear. Through this collaborative planning process, communities can ensure better coordination between police services and community partners. Your CSWB plan will allow for appropriate crisis response and proactive programs that address local risks and improve the social determinants of health. This type of planning can also lead to improvements in service delivery across multiple sectors, benefitting everyone in the community.

By engaging in this holistic approach to CSWB planning, communities can ensure those in need receive the correct response by the appropriate service provider in a timely manner. This is an important step in alleviating the long-term reliance on the criminal justice system and the financial burden of crime on society.

Throughout the implementation of your CSWB plan, it will be essential to measure outcomes on an ongoing basis to determine progress on addressing local priority risks. Over time, priorities may change as improvements are made to reduce identified risks in the community. Therefore, it will be important to regularly monitor and update your CSWB plan to ensure that the plan continues to be reflective of the needs of the community.

As we move forward with CSWB planning in Ontario, I want to thank you for your continued support and ongoing efforts in helping to build safer and stronger communities in Ontario. This is something I am very proud of and I am optimistic about our future.

Sincerely,



Michael Kerzner
Solicitor General

c: Melanie Hudson
Administrative Assistant/Deputy Clerk
Township of Asphodel-Norwood

Report and Capital Project Status

Report Status

Priority	Directed By	Date Requested	Resolution or Direction	Staff Responsi	Est. Report Date	Status
High	Council	2020-12-10	Fire Station	B. Balfour	2024	25%
Normal	Council		ICIP Update Millbrook Arena	K. Pope	2024	Fall
Normal	Staff		Jail Lands IO Update	Y. Hurley/ W. Hancock/ C.Page	2024	
High	Council		Sherbrooke Street West Pedestrian Crossing	W. Hancock	2023	Hiring a Crossing Guard Jan 8, 2024, Waiting on reponse from County, School Board is updating signage, Lights are under Review

Report and Capital Project Status

Capital Project Status

Project List	Department	Status	Est. Report Date	% Complete
IT Infrastructure	Information Technology	In Progress	2023	Ongoing
Baxter Creek Floodplain SSA (Special Study Area)	Planning	In Progress	2024	
Employment Lands Marketing	ECD	In Progress	2023	75% complete
CIP Extended	ECD	Complete	2023	100% complete
Downtown Mural	ECD	In Progress	2023	Council approval received, artist contacted, 50% complete
Corporate Strategic Plan Update	C.A.O		2024	
Official Plan	Planning		2024	County OP posted for approval on ERO, Township provided support, pending provincial approval and PPS approval
Zoning By-law	Planning		2025	Will follow County OP, Township OP and approval
SCBA Units	Fire	Complete	2024	100% complete
Bunker Gear	Fire	Complete	2023	100% complete
Hoses	Fire	Complete	2023	100% complete
Parks and Recreational Plan	Parks and Facilities	Complete	2023	Phase 1 Completed Phase 2 Completed
Cavan Depot Roof and Siding	Public Works	In Progress	2023	Roof Completed, Siding In Progress

Project List	Department	Status	Est. Report Date	% Complete
Intersection Replacement with County of Peterborough	Public Works	In Progress	2023	Tendered
New International Tandem	Public Works	In Progress	2023	Ordered
Alley - King Street	Public Works	In Progress	2023	Under review

Operating duties are not included

Committee of Councils - MVT, MRHAC, BIA, SUSTAINABILITY

Township of Cavan Monaghan

By-law No. 2023-62

Being a by-law to regulate traffic and parking within the limits of the Township of Cavan Monaghan.

Whereas the Municipality has the authority to pass by-laws to regulate the foregoing, pursuant to the Municipal Act, 2001;

Now Therefore, the Council of the Township of Cavan Monaghan hereby enacts as follows:

Part 1 Definitions

For the purpose of this By-law:

“Bicycle” includes tricycles and unicycles but does not include a motor assisted bicycle.

“Boulevard” means the portion of the road allowance lying between the sidewalk and the roadway. On roads where there are no sidewalks it shall mean the portion of the road allowance lying between the travelled portion of the road and the limit of the road allowance.

“Bridge” means any bridge spanning a water course or ravine.

“Commercial Vehicle” means a motor vehicle having permanently attached thereto a truck or delivery body and includes ambulances, hearses, casket wagons, fire apparatus, police patrols, motor buses and tractors. A van that is used for commercial purposes is to be considered a commercial vehicle.

“Gross Weight” means the combined weight of the vehicle and the load.

“Heavy Vehicle” means a vehicle, object or contrivance for moving loads having a registered gross weight, including the vehicle, object or contrivance and load, greater than two thousand, two hundred and sixty seven decimal nine six (2,267.96) kilograms, but does not include a passenger vehicle, ambulance, public works vehicle, fire department vehicle, police vehicle or a privately owned commercial vehicle which is being driven to or from the residence by the owner or other family member, or a commercial motor vehicle making a delivery to or collecting from a bonafide destination, which cannot be reached by way of a highway or highways upon which heavy traffic is not prohibited by this By-law.

“Highway” includes a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, designed and intended for, or

used by, the general public for the passage of vehicles.

“Intersection” means the area embraced within the prolongation or connection of the lateral curb lines, or, if none, that lateral boundary lines of two or more highways that join one another at an angle, whether or not one highway crosses the other.

“Minister” means the Minister of Transportation.

“Park or Parking” when prohibited, means the standing of a vehicle, whether occupied or not, except when standing temporarily for the purpose of and while actually engaged in, loading or unloading merchandise and passengers.

“Pedestrians” means persons afoot, persons in wheelchairs and children in wheeled carriages, sleds and wagons.

“Police Officer or Officer” means a member of the Ontario Provincial Police Force, Peterborough Police Services or a Municipal Law Enforcement Officer authorized to enforce the provisions of this By-law, and designated as a Provincial Offences Officer and includes all other persons appointed as Provincial Offences Officers.

“Restricted Parking Area” means any of the locations named or described in Schedules “B”, “C”, and “D” attached to and forming part of this By-law.

“Roadway” means that part of the highway which is improved, designated or ordinarily used for vehicular traffic, but does not include the shoulder, and, where a highway includes two or more separate roadways, the term “Roadway” refers to any one roadway separately but not to all roadways collectively.

“Sidewalk” means any sidewalk, pathway, footpath or other area forming part of any highway or bridge or boulevard, or other means of walkways used by, or set apart for, the use of pedestrians.

“Stand or Standing” when prohibited, means the halting of a motor vehicle, whether occupied or not, except when necessary to avoid conflict with other traffic or in compliance with the direction of a police officer, a traffic control sign or traffic control signal.

“Stop or Stopping” when prohibited, means the halting of a vehicle, even momentarily whether occupied or not, except when necessary to avoid conflict with other traffic or in compliance with the directions of a constable or other police officer, or of a traffic control sign or signals.

“Street” includes a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, designed and intended for, or

used by, the general public for the passage of vehicles.

“**Time**” where an expression of time occurs or where any hour or other period of time is stated, the time referred to shall be Eastern Standard Time, except in periods when Daylight Saving Time is in effect, such time shall be Eastern Daylight Saving Time.

“**Traffic**” includes pedestrians, ridden or herded animals, vehicles, buses and other conveyances, either singularly or together using any street for purposes of travel.

“**Traffic Control Device**” means any sign, roadway, curb or sidewalk marking, or other device erected or placed under the authority of the Municipal Council for the purpose of guiding or directing traffic.

“**Vehicle**” includes a bicycle, a motorcycle, motor vehicle trailer, traction engine, farm tractor, road building machine and any vehicle propelled or driven by any kind of power, including muscular power, but does not include a motorized snow vehicle or the cars of electric or steam railways running only upon rails.

Part 2 Traffic

- | | | |
|---|-----|---|
| Enforcement | 2.1 | The provisions of this By-law may be enforced by an Ontario Provincial Police Officer, Peterborough Police Services or a Provincial Offences Officer or any persons authorized to enforce the By-law. |
| Stop Signs | 2.2 | The intersections on highways, or parts of Highways, within the Township of Cavan Monaghan, as described in Schedule “E”, attached to and forming part of this By-law, shall be designated as “Stop” intersections |
| Excavation & Barricade | 2.3 | No person or persons shall open excavations, erect barricades, store earth or construction materials, or park work equipment on any portion of any highway without first obtaining approval from the Township of Cavan Monaghan Director of Public Works, or his/her designate. Such approval shall be registered with the Clerk of the Township of Cavan Monaghan. |
| Placement Material on Township Property | 2.4 | No person shall place snow, stones, soil, rubbish or materials of any kind from |

private property upon the highways, boulevards or sidewalks of the Township of Cavan Monaghan.

- | | | |
|--|------|---|
| Remove/Injure Traffic Signs | 2.5 | No person or persons shall, without lawful authority, attempt to or, in fact, alter, deface, injure, break down or remove any official traffic control device or any inscription, shield or insignia thereon, or part thereof. |
| Heavy Vehicles Prohibited | 2.6 | When properly worded signs have been erected and are on display, no person shall drive, move or otherwise operate "Heavy Vehicles" upon any highway or part of a highway named or described in Schedule "J", attached to and forming part of this By-law. |
| Load Restrictions | 2.7 | When properly worded signs have been erected and are on display, no person shall operate a vehicle on a highway or part of a highway if any axle of the commercial vehicle or its trailer transmits to the highway a weight in excess of 5 tonnes (5000 kg.) between March 1 and April 30. |
| Bicycle Riders to Ride on Right | 2.8 | A person riding a bicycle on a roadway shall ride as near to the right hand side of the roadway as is practicable and shall exercise due care when passing a standing vehicle or one proceeding in the same direction. |
| Motorized Snow Vehicles after 11:00 p.m. | 2.9 | (a) No person shall drive a motorized snow vehicle upon any highway within the Township of Cavan Monaghan between the hours of 11:01 p.m. and 7:00 a.m.

(b) Section (a) does not apply to a person or persons driving a motorized snow vehicle who is proceeding directly to the residence of the registered owner of the motorized snow vehicle or directly to a place of employment or by emergency services for emergency purposes. |
| Maximum 15 KMH | 2.10 | When properly worded Speed Limit signs have been erected and are on display, no |

person shall drive a motor vehicle at a rate of speed greater than 15 kilometres per hour on any highway or parts of a highway described in Schedule "F", attached to and forming part of this By-law.

Maximum 40 KMH 2.11 When properly worded Speed Limit signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 40 kilometres per hour on any highway or parts of a highway described in Schedule "G", attached to and forming part of this By-law.

Maximum 50 KMH 2.12 When properly worded Speed Limit signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 50 kilometres per hour on any highway or parts of a highway described in Schedule "H", attached to and forming part of this By-law.

Maximum 60 KMH 2.13 When properly worded Speed Limit signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 60 kilometres per hour on any highway or parts of a highway described in Schedule "I" attached to and forming part of this By-law.

Part 3 Parking

Parking Restricted 3.1 When properly worded signs have been erected and are on display, no person shall park a vehicle on any highway between the limits and periods of time as described in Schedule "A" attached to and forming part of this By-law.

(a) When properly worded signs have been erected and are on display, between the hours of 9:00 a.m. and 6:00 p.m., from Monday to Saturday inclusive, no person shall park a vehicle for any one period of time in excess of fifteen (15) minutes on those parts of streets named or described in Schedule "C".

(b) When properly worded signs have been erected and are on display at all entrances to the Millbrook Ward, no person shall park a vehicle on any street between the hours of 2:00 a.m. and 7:00 a.m. of the same day from November 15 of one year and April 1 of the following year.

(c) When properly worded signs have been erected and are on display, between the hour of 9:00 a.m. and 6:00 p.m., from Monday to Saturday inclusive, no person shall park a vehicle for any one period of time in excess of two (2) hours on those streets or parts of streets named or described in Schedule "D" of this By-law.

(d) When properly worded signs have been erected and are on display, no person shall park on a vehicle on the street except as permitted by Schedule "K".

Parking Prohibited

3.2 When properly worded signs have been erected and are on display, no person shall, at any time, park a vehicle in the following places within the Township of Cavan Monaghan:

In any area described in Schedule "B", Schedule "C", and Schedule "D", attached to and forming part of this By-law.

No Parking General

3.3 No person, within the Township of Cavan Monaghan, shall park a vehicle in any of the following places;

(a) In front of a public or private driveway;

(b) Within nine (9) metres of an intersection;

(c) Within three (3) metres of a Fire Hydrant;

(d) On any highway between the hours of 12:01 a.m. and 7:00 a.m.;

(e) On any Highway in such a manner as to

obstruct or impede the removal of snow from the highway;

(f) Within any cul-de-sac area;

(g) No person shall park or stop a vehicle that obstructs a sidewalk or walkways, or obstruct the sodded boulevard beside the driveway approach between the sidewalk and curb line.

Stopping Prohibited

3.4 No person shall stop a vehicle in any of the following places:

(a) In front of the entrance to a public lane or a private driveway or so as to prevent entry to or exit from such public land or private driveway;

(b) Within three (3) metres of a Fire Hydrant;

(c) On any highway in such a manner as to obstruct or impede the removal of snow from the highway;

(d) On any highway in such a manner as to prevent the convenient removal of another vehicle previously parked or standing;

(e) On the highway side of any vehicle previously parked or standing;

(f) Alongside or across from any obstruction or excavation in such a manner as to obstruct, impede or otherwise restrict the normal flow of traffic;

(g) Opposite another vehicle, parked or standing, on any highway wherein said highway is less than eleven (11) metres in width;

(h) On any highway as described in Schedule "A", attached to and forming part of this By-law.

Part 4 Penalties

- 4.1 Any person violating any of the provisions of this By-law is liable to the penalty as prescribed by the applicable law for each offence.

Where a vehicle is found parked in contravention of the provisions contained in Part 3 of this By-law, an Ontario Provincial Police, Peterborough Police Services or a Provincial Offences Officer or a Municipal Law Enforcement Officer authorized to enforce the By-law finding the vehicle may have the vehicle towed away at the expense of the owner.

Part 5 Effective Dates

- 5.1 This By-law shall come into force and effect upon approval and that By-law No. 2022-65 be repealed in its entirety.
- 5.2 This By-law shall come into force and take effect upon final passage by the Township of Cavan Monaghan and when signs have been erected and are on display in compliance with the regulations of the Ministry of Transportation.

Part 6 General Provisions

- 6.1 The short title of this By-law shall be the "Parking and Traffic By-law".

Read a first, second and third time and passed this 18th day of December, 2023.

Matthew Graham
Mayor

Cindy Page
Clerk

Schedule “A”

No Stopping

When properly worded signs have been erected and are on display, no person shall park a vehicle on any of the highways or parts of highways hereinafter set out:

Anne Street	North Side – from Hay Street to Cavan Street East Side – from Cavan Street to Frederick Street
Centre Street	North Side – from Union Street to a point 35 metres east of Union Street South Side – from Union Street to west limits of Centre Street
Distillery Street	West Side
Duke Street	East Side – from King Street east to a point 58 metres south of King Street East
Needler’s Lane	North Side – from Allan Lane to Hay Street South Side - from Baxter Creek to a point 15 metres west of Baxter Creek
Frederick Street	South Side – from Anne Street to Main Street
Hay Street	West Side – entire side of street to Anne Street East Side – from a point 50 metres south of King Street East to Needler’s Lane
Huston Street	West Side – from King Street West to south limits of Huston Street
Lisa Court	Both Sides – within circle at south end of Lisa Court
Main Street	East Side – from a point 69 metres south of King Street East to Charles Street East Side – from Marshall Street to a point 67 metres north of Frederick Street East Side – from Frederick Street to the south limits of Main Street West Side – from a point 48 metres south of King Street East to a point 35 metres south of Charles Street West Side – from a point 45 metres south of Marshall Street to a point 30 metres north of Frederick Street

Needler's Lane	East Side – from a point 27 metres south of Distillery Street to a point 66 metres south of Distillery Street West Side – from Distillery Street to a point 69 metres south of Distillery Street
Queen Street	West Side – from King Street West to the north limits of Queen Street
Union Street	West Side – from Centre Street to a point 50 metres south of Centre Street

Schedule “B”

Restricted Parking

Unless otherwise properly signed, no person shall park a vehicle on any highway for longer than four (4) hours or in such a manner as to impede snow removal.

Schedule “C”

Restricted Parking

When properly worded signs have been erected and are on display, no person shall park a vehicle on a highway or parts of highways hereinafter set out in excess of fifteen (15) minutes:

Union Street West Side – From a point 9 metres north of King Street West to a point 19 metres north of King Street West

Schedule “D”

Restricted Parking

When properly worded signs have been erected and are on display, no person shall park a vehicle on a highway or parts of highways hereinafter set out in excess of two (2) hours:

Hay Street	East Side – Between King Street East to a point 50 metres south of King Street East
Distillery Street	West Side – Between King Street East and Needler’s Lane East Side – Between King Street East and the north abutment of Baxter Creek Bridge
Centre Street	South Side – Between Tupper Street and Union Street North Side – Between Tupper Street and a point 35 metres east of Union Street
Union Street	East Side – Between King Street West and Centre Street West Side – Between a point 19 metres north of King Street West and a point 50 metres south of Centre Street

Schedule "E"

Providing for the Erection of Stop Signs at Intersections

The intersections on highways set out in Column 1 are designated as intersections where Stop signs shall be erected at the locations shown in Column 2.

Column 1: Intersection

Column 2: Facing Traffic

McCamus ¼ Line at Eagleson Line	Southbound on McCamus ¼ Line
McCamus ¼ Line at Carmel Line	Northbound on McCamus ¼ Line
Brackenridge Dr. at Carmel Line	Southbound on Brackenridge Dr.
Brackenridge Dr. at Deyell Line	Northbound on Brackenridge Dr.
T-Way Dr. at Deyell Line	Northbound on T-Way Dr.
Thorne Dr. at Deyell Line	Southbound on Thorne Dr.
Thorne Dr. at Zion Line	Northbound on Thorne Dr.
Bee Dr. at Deyell Line	Northbound on Bee Dr.
Ava Cr. at Deyell Line	Southbound on Ava Cr.
Carveth Dr. at Zion Line	Southbound on Carveth Dr.
Elgar Dr. at Zion Line	Northbound on Elgar Dr.
Elgar Ct. at Elgar Dr.	Westbound on Elgar Ct.
White Birch Rd. at Elgar Dr.	Westbound on White Birch Rd. White
Birch Rd. at White Birch Rd.	Eastbound on White Birch Rd.
Zion Line at Glamorgan Rd.	Westbound on Zion Line
Hutchison Dr. at Zion Line	North and Southbound on Hutchison Dr.
Hutchison Dr. at Cedar Valley Rd.	Westbound on Cedar Valley Rd.
Hutchison Dr. at Cedar Cr.	Eastbound on Cedar Cr.
Hutchison Dr. at Larmer Line	North and Southbound on Hutchison Dr.
Hutchison Dr. at Syer Line	Northbound on Hutchison Dr.
Glamorgan Rd. at Fallis Line	Northbound on Glamorgan Rd.
Fallis Line at Tapley ¼ Line	East and Westbound on Fallis Line
Valleyview Drive at Fallis Line west side	Southbound on Valleyview
Valleyview Drive at Fallis Line east side	Southbound on Valleyview
Morningside Place at Valleyview Drive	Southbound on Morningside
Scout Cr. at Tapley ¼ Line	Westbound on Scout Cr.
Tapley ¼ Line at Valley Rd.	Westbound on Valley Rd.
Deer Ave. at Valley Rd.	Southbound on Deer Ave.
Acadia Ct. at Valley Rd.	Northbound on Acadia Ct.
Pine Tree Cr. at Valley Rd.	Eastbound on Pine Tree Cr.
Maple Tree Cr. at Pine Tree Cr.	Northbound on Maple Tree Cr.
Plains Circle at Deer Ave	Eastbound on Plains Circle
Plains Circle at Plains Circle	Southbound on Plains Circle
Larmer Line at Tapley ¼ Line	Westbound on Larmer Line
Deer Ave. at Larmer Line	Northbound on Deer Ave.
Valley Rd. at Larmer Line	Northbound on Valley Rd.
Vista Cr. at Syer Line	Southbound on Vista Cr.

Syer Line at Tapley ¼ Line
Highview Cr. at Syer Line
Dranoel Rd. at Syer Line
Dranoel Dr. at Dranoel Rd.
Ford Cr. at Ford Dr.
Moore Dr. at Moore Dr.
Morton Line at Dranoel Rd.
Tapley ¼ Line at Morton Line
Sharpe Line at Dranoel Rd.
Jack Lane at Sharpe Line
Sharpe Line at Winslow ¼ Line
Cora Drive at Sharpe Line
Howden ¼ Line at Sharpe Line

Cathcart Cr. at Stewart Line
Preston Rd. at Stewart Line
Howden ¼ Line at Stewart Line

Winslow ¼ Line at Stewart Line

Darling Cr. at Stewart Line
Darling Cr. at Darling Cr.
Jill Lane at Stewart Line
Howden ¼ Line at Hooton Dr.

Hooton Dr. at Hooton Dr.
Fieldview Dr. at Hooton Dr.
Hooton Dr. at Preston Rd.
Best Rd. at Hayes Line
Jones ¼ Line at Bland Line
Shields Dr. at Bland Line
Hayes Line at Jones ¼ Line
Albert St. at Bland Line
High St. at Mt. Pleasant Rd.
Albert St. at Mt. Pleasant Rd.
Meadow Lane at Workman St.
Rose Cr. at Kennedy Dr.
Ashley Cr. at Cathcart Cr.
Brewda Cres. at Kalman Drive
Kalman Drive at Carmel Line
Dufferin Street at Gravel Road
Needler's Lane and Distillery St.
Needler's Lane and Allen Lane
Hay Street and Needler's Lane
Prince Street at Anne Street
Princess Street at Anne Street

East and Westbound on Syer Line
Southbound on Highview Cr.
Westbound on Syer Line
Westbound on Dranoel Dr.
Eastbound on Ford Cr.
Eastbound on Moore Dr.
Westbound on Morton Line
Northbound on Tapley ¼ Line
Westbound on Sharpe Line
Southbound on Jack Lane
Westbound on Sharpe Line
Northbound on Cora Dr.
North and Southbound on Howden ¼
Line
Northbound on Cathcart Cr.
Southbound on Preston Rd.
North and Southbound on Howden ¼
Line
North and Southbound on Winslow ¼
Line
Northbound on Darling Cr.
Southbound on Darling Cr.
Northbound on Jill Lane
North and Southbound on Howden ¼
Line
Westbound on Hooton Dr.
Northbound on Fieldview Dr.
Eastbound on Hooton Dr.
Northbound on Best Rd.
Southbound on Jones ¼ Line
Northbound on Shields Dr.
Northbound on Jones ¼ Line
Northbound on Albert St.
North and Southbound on High St.
Southbound on Albert St.
Westbound on Meadow Lane
Westbound on Rose Cr.
Eastbound on Ashley Cr.
Westbound on Brewda Cres.
Northbound on Kalman Drive
Eastbound on Dufferin Street
Northbound on Needler's Lane
Southbound on Allen Lane
Westbound on Needler's Lane
Northbound on Prince Street
Northbound on Princess Street

Cavan Street at Anne Street
Anne Street at Frederick Street
Frederick Street at Anne Street
Frederick Street at Main Street
Frederick Street at Main Street
Marshall St. at Main Street
Charles Street at Main St.
Charles Street at Main St.
Sowden Lane at Main St.
Union St. at Centre Street
Union St. at Manor Drive
Baxter Creek Ct. at Brookside St.
Burnham Ct. at McGuire Dr.
Wing St. at Bank St. South
Century Blvd. at Centennial Lane
Century Blvd. at Nina Court
Bartlett Rd. at Whitfield Rd.
Maplehill Court at Maplehill Drive
Avenue at Longview Drive
Filman Crescent at Longview Drive
Campbell Avenue at Campbell Avenue
Whittington Drive at Dobbin Road
Whittington Drive at Elmdale Road
Davis Road at Stewart Line
Davis Road at Maple Grove Road
Grove Road at Preston Road
Elmdale Road at Brown Line
Brown Line at Elmdale Road
Worboy Ct. at Beardsmore Road
Carolyn Street at Johnston Dr.
Skiview Dr. at Hillview Dr.

Eastbound on Cavan Street
Southbound on Anne Street
Eastbound on Frederick Street
Westbound on Frederick Street
Eastbound on Frederick Street
East and Westbound on Marshall St.
Westbound on Charles Street
Eastbound on Charles Street
Westbound on Sowden Lane
North and Southbound on Union St.
All (4) Way Stop
Northbound on Baxter Creek Ct.
Southbound on Burnham Ct.
Westbound on Wing St.
Southbound on Century Blvd.
Northbound on Century Blvd.
Southbound on Bartlett Rd
Eastbound on Maplehill Court Campbell
East & Westbound on Campbell Ave
Eastbound on Filman Crescent
Southbound on Campbell Ave
East & Westbound on Whittington Drive
East & Westbound on Whittington Drive
Southbound on Davis Road
Northbound on Davis Road Maple
Westbound on Maple Grove Road
Southbound on Elmdale Road
East & Westbound on Brown Line
Eastbound on Worboy Ct.
Northbound on Carolyn Street
Westbound on Skiview Dr.

Schedule "F"

15 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 15 kilometres per hour as hereinafter set out:

Highway	From	To
Mervin Line	Airport Road	End

Schedule "G"

40 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 40 kilometres per hour as hereinafter set out:

Highway	From	To
Ford Drive	Highway 7A	End
Ford Crescent	Highway 7A	Ford Drive
Highview Crescent	Syer Line	End
Carveth Drive	Zion Line	Huston

Schedule "H"

50 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 50 kilometres per hour as hereinafter set out:

Highway	From	To
Carmel Line	County Rd. 28	1150 meters westerly
Edgewood Park Drive	Mount Pleasant Road	End
Preston Road	Maple Grove Road	Stewart Line
Hooton Drive	Preston Road	650 meters westerly
Larmer Line	Tapley ¼ Line	1300 metres easterly
Tapley ¼ Line	Fallis Line	Syer Line
Cedar Valley Road	Hutchison Drive	County Rd. 28
Hutchison Drive	100 metres north of Cedar Valley Road	700 metres southerly
Morton Line	Highway 7	500 metres westerly
Sharpe Line	County Rd. 10	1200 metres easterly
Sharpe Line	County Rd. 10	700 metres westerly
Scout Crescent	Tapley ¼ Line	End
Plains Circle	Deer Avenue	End
Pine Tree Crescent	Valley Rd.	End
Maple Tree Crescent	Pine Tree Crescent	End
Valley Road	Tapley ¼ Line	Larmer Line
Acadia Court	Valley Road	End
Valleyview Drive	Fallis Line	Fallis Line
Morningside Place	Valleyview Drive	End
White Birch Road	Elgar Drive	End
Kennedy Drive	Mount Pleasant Road	End
Rose Crescent	Kennedy Drive	End
Workman Street	Mount Pleasant Road	Mill Street
Meadow Lane	Workman Street	End
High Street	Mill Street	End
Mill Street	Workman Street	High Street
Albert Street	Mount Pleasant Road	Bland Line
Rothesay Avenue	Lansdowne Street	End
Ashley Cres.	Cathcart Cres.	End
Syer Line	County Rd. 10	100 metres west of the Municipal address 888 Syer Line
Clifford Line	Highway 7	End
Dobbin Road	Whittington Drive	1.2 km to city limits
Whittington Drive	Rosemount Gardens	3.2 Easterly
Davis Road	Stewart Line	Maple Grove Road

Elmdale Road	North Monaghan	Brown Line
Brown Line	Hwy 7	Airport Road
Beardsmore Road	Airport Road	Worboy Court
Johnston Drive	Worboy Court	City Limits
Whitfield Road	County Road 28	End
Bartlett Road	Moncrief Line	Whitfield Road
Longview Drive	Sherbrooke St. W.	End
Campbell Avenue	Longview Drive	East end
Campbell Avenue	Longview Drive	Campbell Avenue
Filman Crescent	Longview Drive	Longview Drive
Carolyn Street	Beardsmore Road	End
Worboy Court	Beardsmore Road	End
Brown Line	Airport Road	East end
Maplehill Drive	Sherbrooke Street	End
Maplehill Court	Maplehill Drive	End
Deer Avenue	Larmer Line	Valley Road
Elgar Court	Elgar Drive	End
Kalman Drive	Carmel Line	End
Brewda Court	Kalman Drive	End
Skiview Drive	Hillview Drive	End
Miller Street	County Road 10	End
King George Street	County Road 10	Elizabeth Street
Elizabeth Street	Miller Street	King George St.
Poplar Plains Drive	County Road 10	Fallingbrook Drive
Cavan Woods Drive	County Road 10	Fallingbrook Drive
Fallingbrook Drive	Poplar Plains Drive	Cavan Woods
Mount Pleasant Road	Queen Mary Street	High Street
Blue Jay Street	Queen Mary Street	Alexander Drive
Alexander Drive	Blue Jay Street	End
Jill Lane	Stewart Line	End
Fieldview Drive	Hooton Drive	End
Huston Street	Millbrook Ward limits	Carveth Drive
Sunset Drive	Highway 7A	End
Fallis Line	County Road 10	Tapley ¼ Line

All Highways within the Millbrook Settlement Area.

Schedule "I"

60 KM/H Speed Limit

When properly worded signs have been erected and are on display, no person shall drive a motor vehicle at a rate of speed greater than 60 kilometres per hour as hereinafter set out:

Highway	From	To
Stewart Line	County Rd. 10	Preston Road
Stewart Line	County Rd. 10	Dranoel Road
Wilson Line	County Rd. 10	Westerly limit
Darling Crescent	Stewart Line	End
Jack Lane	Sharpe Line	End
Vista Crescent	Syer Line	End
Elgar Drive	Zion Line	End
Bee Drive	Deyell Line	End
Ava Crescent	Deyell Line	End
T-Way Drive	Deyell Line	End
Carmel Crescent	County Rd. 10	End
Zion Line	County Rd. 28	County Road 10
Sharpe Line	Highway 7	Howden ¼ Line
Cathcart Crescent	Stewart Line	Highway 7
Deyell Line	County Road 10	Hutchison Drive
Bland Line	County Road 10	Westerly limit
Jones ¼ Line	Bland Line	300 metres northerly
Syer Line	Tapley ¼ Line	100 metres west of the Municipal address 888 Syer Line
Carmel Line	County Rd. 10	100 metres east of County Rd. 28.
Howden ¼ Line	Stewart Line	Sharpe Line
Morton Line	County Road 10	500 metres westerly of Highway 7

Schedule "J"

Heavy Vehicles Restricted

Road	Section	Restricted Hours
Cathcart Cr.	From Stewart Line to Highway 7	At all times
Dobbin Road	From limits of City of Peterborough to Dobbin Road south	At all times
Elmdale Road	From Brown Line to South entrance to Sysco Food Terminal	At all times
Whittington Dr.	From limits of City of Peterborough west to Dobbin	At all times
Whitfield Road	Bartlett Road/Whitfield Landing Intersection to the east end	At all times
Brown Line	From Hwy. 7 to Airport Road	At all times
Preston Road	Maple Grove Road to Stewart Line	At all times
Brown Line	Hwy 7 to Airport Road	At all times
Davis Road 1.4 km Northbound	From Stewart Line	At all times
Preston Road	Maple Grove Road to Stewart Line	At all times
Brown Line	Hwy 7 to Airport Road	At all times
Whittington Drive	East of 2085 Whittington Drive to End	At all Times

Schedule “K”

No Parking

When properly worded signs have been erected and are on display, no person shall park a vehicle on the street identified except as permitted herein;

Highway	From	To
Brookside Street	Tupper Street North Side – January 1 – June 30 South Side – July 1 – December 31	400 metres west of Tupper Street
Brookside Street	Driveway of 97 Brookside Street	6 metres East of Driveway at Brookside Street
Cedar Crescent	Hutchinson Drive	End of Cedar Crescent on the South East side

The Township of Cavan Monaghan

By-law No. 2023-85

Being a by-law to provide for the licencing and registration of dogs, and for prohibiting or regulating the running at large of dogs

Whereas the Municipal Act, 2001, S.O. c. 25, Sections 11, 103 & 105 provide that Municipalities may pass By-laws to regulate animals; and authority in respect to the seizure and impounding of dogs found running at large and the muzzling of dogs;

And Whereas the Council of the Township of Cavan Monaghan deems it advisable to pass a By-law for the licencing and requiring the registration of dogs and for prohibiting or regulating the running at large of dogs in the Township;

And Whereas Subsection 391 (1) of the Municipal Act 2001, S.O. c. 25, authorizes a municipality to impose fees or charges on persons for services or activities provided or done on behalf of it;

Now Therefore the Council of the Township of Cavan Monaghan hereby enacts as follows:

1. **Definitions:** For the purpose of this By-law:

Dangerous Dog – means a dog that:

- (a) has attacked, bitten or caused injury to a person or has demonstrated a propensity, tendency or disposition to do so; or
- (b) has significantly injured a domestic or farm animal; or
- (c) has shown the disposition or tendency to be threatening or aggressive to persons or animals.

Dog – means a male or female dog whether neutered or spayed that is over 12 weeks of age.

Dog Control Officer – includes any person employed by the Township of Cavan Monaghan to enforce the provisions of this By-law.

Minor – is a person who has not achieved the age of majority as defined by applicable Provincial Law.

Owner of Dog – includes a person who possesses or harbours a dog and, where the owner is a minor, the person responsible for custody of the minor.

Possession or Harbours – of a dog shall be deemed to occur when a person permits a dog to remain at or about or on the property or the premises which they own or occupy or which is habitually kept on such property.

Service Dog – means a dog trained and actively used to work or perform tasks for persons living with disabilities.

Township – means the Township of Cavan Monaghan.

Township Clerk – means the person within the Township’s administration who fulfills the function of the Clerk as required by the Municipal Act, 2001 or their designate.

2. Requirements for a Licence

- 2.1** Every person who owns a dog which is kept in the Township shall obtain a licence for such dog and shall pay the licence fee for such dog as set out in the User Fees and Charges By-law.
- 2.2** The requirement to obtain a licence as prescribed in Section 2.1 shall occur when a person:
 - (a) becomes the owner of the dog, and is kept within the Township; or
 - (b) when the dog is possessed or harboured in the Township for a period of more than fourteen (14) days.
- 2.3** All annual licences issued under this By-law shall expire on the 31st day of December in each year and the owner shall be required to renew the licence by paying the prescribed fee annually upon receipt of invoice.
- 2.4** Registration and licencing of a dog under the age of six (6) months is not required by this By-law.
- 2.5** Annual licencing fees are set out in the Township of Cavan Monaghan’s current User Fees and Charges By-law.

3. Identification of Dog(s) and Issuance of Tags

- 3.1** Every person who is issued a licence pursuant to Section 2.1 shall be given a lifetime tag for such dog. The tag shall indicate an identification serial number creating a registration record for such dog.
- 3.2** Every person who is provided with a tag pursuant to Section 3.1 shall ensure that the tag is affixed to the collar of the dog in such a manner that the tag can identify such dog to any person at all times and the same shall be secured on the dog until the tag is renewed or replaced.
- 3.3** Section 3.2 does not apply in cases when the dog is receiving veterinary treatment, or is being groomed, or otherwise cannot have the tag affixed because it would present a danger to the dog, or when the dog is being lawfully used for hunting in the bush.

- 3.4 A record shall be kept by the Township, showing the name, address and phone number of the owner of the dog and the serial number of the tag provided to the person pursuant to Section 3.1.
- 3.5 Tags which are lost may be replaced by providing sufficient proof that the dog possessed a licence for the current year and paying to the Township the sum set out in the User Fees and Charges By-law.

4. Service Dog

Sections 2 and 3 of this By-law shall not apply to any person living with a disability and owns a dog (or dogs) for their assistance as a service dog.

5. Dogs at Large

- 5.1 No person shall permit a dog owned by them to run at large in the Township, and running at large shall be deemed to occur when the dog is found in any place other than the property or premises of the owner, and not under the control of any person, and held securely in or on a leash to prevent the possibility of any person or other animal (including another dog) from being attacked or bitten by such dog.
- 5.2 Section 5.1 shall not apply in cases where prior consent to allow the dog to be at large is given by the person owning the land on which the dog is found.
- 5.3 The Dog Control Officer may seize and impound any dog found running at large and deliver same to the Humane Society.
- 5.4 Any person may restrain, at their own risk, any dog found at large on their property, or at large on a public property, and surrender the dog to the custody of the Dog Control Officer.
- 5.5 Where a dog seized under this By-law is injured, or should be destroyed without delay for humane reasons or for reasons of safety to persons or animals, the dog may be euthanized in a humane manner at the Dog Control Officer's discretion and no damages or compensation shall be recovered by the Owner of the dog for such action.
- 5.6 Where a dog is captured or taken into the custody, including by order of a court, or under the direction of the local police services, the Owner shall pay to the Township all applicable fees and charges, including the cost of the services of a veterinarian, whether the animal is alive, dies or is euthanized.
- 5.7 Where an injured dog is impounded or otherwise detained and requires the immediate attention of a Veterinarian, the Dog Control Officer may deliver the injured dog to a Veterinarian for treatment or euthanize and the Owner, if

known, shall be responsible for all costs incurred. No damages or compensation shall be recoverable by the Owner or any other person.

6. Restricting the Number of Dogs

No person shall have, retain, harbor or have possession of:

- (a) More than three (3) dogs within or about any single detached dwelling; or
- (b) More than two (2) dogs within or about any dwelling unit for properties with two (2) or more dwelling units regardless of whether that person is the owner of the dogs;
- (c) Sections (a) and (b) shall not apply to a property which is zoned Agricultural, a property possessing a valid kennel license, an approved business and/or veterinary offices.
- (d) The Clerk of the Township of Cavan Monaghan may authorize, in unique circumstances, additional dogs to be kept for a specified period of time.

7. Seizure and Impounding of Dogs

7.1 The Officer responsible for the enforcement of this By-law may:

- (a) Seize and impound any dog(s) found running at large within the Township and impose fees as attached.
- (b) Where it is impossible to identify the owner of the dog(s), the Officer shall deliver the dog(s) to the Humane Society.
- (c) Where, in the opinion of the Officer responsible for the enforcement of this By-law, a dog seized, is injured or should be destroyed without delay for humane reasons, or for reasons of safety to persons, the Officer may destroy the dog(s) as soon after seizure as they think fits without permitting any person to reclaim the dog.
- (d) Where the Officer responsible for the enforcement of this By-law finds a dog(s) running at large contrary to the provisions of this By-law and they believe that before they can seize the dog(s) it may attack a human being or another animal, they may destroy the dog(s).
- (e) No damages or compensation shall be recoverable by the owner of the dog(s) on account, or as a result of the actions of the Officer responsible for the enforcement of this By-law.

- 7.2**
- (a) Any dog, impounded pursuant to Section 7.1 may be kept at the Humane Society, a secure place, and a fee charged to the owner as set out in set fines payable to the Township and any fees charged by the Humane Society, prior to the release of the dog, for all costs of the distrainted.
 - (b) When a dog is so impounded and kept pursuant to this Section and is kept at the Humane Society, the dog shall be dealt with after the minimum redemption period has expired as established by the current Provincial Legislation.

8. Dog Owners Liability Act

It is the declared intention of Council that the Dog Owners' Liability Act shall be enforced under the Provincial jurisdiction, and further that the Dog Control Officer are recognized as Officers under the authority of the Dog Owners' Liability Act to ensure the expedient and efficient application of this Act.

9. Guard Dogs

Any person who owns/harbours a dog trained for the purpose of attack or guard shall so notify the Clerk in writing. The premises where such a dog is normally kept shall be securely fenced and posted in order that such a dog can be restricted. If it is necessary for such a dog to leave the owner's premises, the dog shall be on a short leash and shall be muzzled.

10. Dangerous Dogs

10.1 All Owners shall exercise all reasonable precautions to prevent their dog from:

- (a) Biting or attacking a person or domestic animal;
- (b) Behaving in a manner that threatens or poses a menace to the safety of persons or domestic animals.

10.2 Every Owner of a dangerous dog that has bitten a person or domestic animal shall ensure that said dog is muzzled and leashed while on any property in the Township.

10.3 Every Owner of a dangerous dog shall keep it indoors or in a secured yard that prevents the dog from escaping over or under the fence or by any other means, and that prevents access by the public. Dangerous dogs shall not be confined only by a chain or tether.

10.4 The Dog Control Officer may seize a dog in a public place if the Officer believes on reasonable grounds that:

- (a) The dog has on one or more occasions bitten or attacked a person or domestic animal;
- (b) The dog has on one or more occasions behaved in a manner that poses a menace to the safety of persons or domestic animals;
- (c) An Owner has on one or more occasions failed to exercise reasonable precautions from carrying out sections (a) or (b) as described above.
- (d) The dog is a restricted pit bull and the Owner has on one or more occasions failed to comply with the requirements of the legislation or regulations respecting pit bulls;
- (e) There is reason to believe that the dog may cause harm to a person or domestic animal.

10.5 Where the Owner objects to the muzzling or leashing requirements set forth above, the Owner may request and is entitled to a Hearing by the Council of the Township of Cavan Monaghan.

11. Muzzle Order/Order to Restrain

11.1 Where the Officer is satisfied on the balance of probabilities and in the absence of any mitigating factor, that a dog has placed a person or domestic animal at risk of physical harm or behaved in a manner that poses a menace to the safety of persons or domestic animals the Officer may issue Muzzle Order / Order to Restrain to the Owner as set out in Schedule 'A' of this By-law. Every person shall comply with such an Order.

11.2 A Muzzle Order/Order to Restrain shall be served upon the dog's Owner by pre-paid registered mail, to the Owner or to an inhabitant of the Owner's usual place of residence who is at least 18 years of age.

11.3 Notwithstanding other Sections of this By-law, when a Muzzle Order/Order to Restrain has been served on the Owner, and at the discretion of the Officer the Owner shall as indicated on the Order:

- (a) Keep the dog, when on the Owner's premises, confined within the dwelling and under the effective control of an adult, or in a secured yard that prevents the dog from escaping over or under the fence or by any other means, or enclosed in a pen constructed with secure sides so as to prevent escape of the dog and prevent entry therein by the public;
- (b) When not confined in accordance with section (a) above, to keep the dog under the effective control of an adult person and on a leash of not more than 1.8 metres (6 feet) in length;
- (c) Ensure that the dog is muzzled at all times when it is not confined as set out above;
- (d) Notify the Dog Control Officer or the Township Clerk within five (5) working days of moving the dog, selling the dog, giving the dog away or death of the dog;
- (e) Immediately advise the Dog Control Officer if the dog is at large, or has bitten or attacked any person or domestic animal;
- (f) If not already licensed, licence and register the dog with the Municipality within seven (7) days of receipt of the Order;
- (g) Not contravene any other conditions imposed in the Order.

11.4 The Dog Control Officer shall maintain a record of all Orders and shall notify and supply a copy to the Township Clerk of the issuance of the Order.

11.5 Any Owner that fails to comply with the requirements of the Order shall pay the set fine or permanently surrender the dog to the Dog Control Officer.

11.6 No person shall hinder or obstruct, nor attempt to hinder or obstruct, either directly or indirectly, an Officer, employee of the Municipality and/or agent in the lawful exercise of a power or duty under this By-law.

12. Muzzle Order/Order to Restrain – Appeal

12.1 Any Owner to who a Muzzle Order/Order to Restrain has been issued shall inform the Township Clerk in writing that they intend to appeal the Order and request a Hearing within fourteen (14) days of being served notice.

12.2 Upon payment of a Hearing Fee as set out in this By-law, the Owner may request and is entitled to a hearing by the Council of the Township of Cavan Monaghan.

12.3 Upon determination of a hearing date, the Clerk shall give notice in writing to the Owner that:

- (a) Includes a statement of the time, date, place and purpose of the hearing; and
- (b) Includes a statement that if the Owner does not attend the hearing, Council may proceed in the absence of the Owner and the Owner will not be entitled to any further notice.

12.4 The notice of hearing shall be served upon the dog's Owner by pre-paid registered mail, to the Owner or to an inhabitant of the Owner's usual place of residence who is at least 18 years of age. When service is made by registered mail, the service shall be deemed to be made on the fifth (5) day after mailing.

12.5 Council shall hold a hearing in accordance with the provisions of this By-law at the time, date and place set out in the notice and Council may:

- (a) Exempt the Owner from muzzling and/or leashing requirements;
- (b) Confirm muzzling and/or leashing requirements;
- (c) Vary muzzling and/or leashing requirements and other requirements of the Order, or
- (d) Combine any exemption confirmation or variance as it sees fit.

12.6 The decision of the Board shall be final and binding.

12.7 An application made by the Owner for a hearing under this By-law does not act as a stay of the Order which shall take effect on the day it is served or deemed serviced, and shall continue to be effective until Council renders a decision indicating otherwise.

13. Stoop and Scoop

Every person who owns, retains, possesses, harbours, keeps or is in control of a dog shall immediately remove any excrement or waste left y the dog on any

property in the municipality, and shall dispose of excrement of waste in an appropriate sanitary manner.

14. Penalties

Every person who contravenes any provision of this By-law is guilty of an offence and upon conviction is liable to a fine as such penalties as provided in the Provincial Offences Act or the Dog Owners Liabilities Act and identified in the set fine schedule.

15. Severability of Provisions

If any section or sections of this By-law, or parts thereof, are to be found by any court of law to be illegal or beyond the power of Council to enact, such section or sections or parts thereof shall be deemed to be severable, and all other sections or parts thereof of this By-law shall be deemed to be separate and independent therefrom and to be enacted as such.

16. Repeal of Previous By-laws

By-law No. 2023-71 is hereby repealed in its entirety.

17. This By-law comes into force and effect on the 18th day of December 2023.

Read a first, second and third time this 18th day of December 2023.

Matthew Graham
Mayor

Cindy Page
Clerk

**The Township of Cavan Monaghan
Schedule 'A' to By-law No. 2023-85
Muzzle Order/Order to Restrain**

To (Name of Owner): _____

Address: _____

Telephone: _____

I, _____, an Officer appointed by the Township of Cavan Monaghan, have reasonable grounds to believe that the dog described as:

Breed: _____ Colour: _____

Age: _____ Name: _____ Microchip: _____

and residing at _____ has bitten or attacked a person or another domestic animal; placed a person or domestic animal at risk of physical harm; or behaved in a manner that poses a menace to the safety of persons or domestic animals, as per the provisions of the By-law No. 2023-85.

You are hereby ordered as indicated below:

- To keep the dog, when on the Owner's premises, confined within the dwelling and under the effective control of an adult, contained by a fence, electric or otherwise, or enclosed in a pen constructed with a secure sides.
- To keep the dog under effective control of an adult and on a leash of not more than 1.8 metres (6 feet) in length when it is not confined as noted above. Flexi leads are not permitted.
- To securely attach a muzzle to the dog at all times when it is not confined as noted above.
- Notify the Dog Control Officer or the Township Clerk within five (5) working days of moving the dog, selling the dog, giving the dog away or death of the dog.
- Immediately advise the Dog Control Officer if the dog is at large, or has bitten or attacked any person or domestic animal.

- Licence and register the dog with the Municipality within seven (7) days of receipt of the Order.

This **Order** takes effect immediately.

If you wish to **Appeal** this Order to Restrain you must apply to the Township Clerk of the within fourteen (14) days from the date this Order is received by you setting out your request for a hearing in front of the Council of the Township of Cavan Monaghan which shall include the reasons for appealing this Order, and the payment of the hearing fee in the amount of \$100.00, failing which this Order is final and binding.

Please be advised, notwithstanding that you may apply for a hearing regarding this Order, this Order takes effect immediately upon its receipt by you and remains in effect for so long as the dog shall live unless a decision on an appeal to rescind this Order, in which case this Order remains in effect until the date a decision is issued by Council.

A full copy of By-law No. 2023-85 being a by-law to provide for the licencing and registration of dogs, and for prohibiting or regulating the running at large of dogs in enclosed to ensure you are fully aware of your rights and obligations in this matter and the basis for the issuing of this Order.

Dated at the _____ this _____ day of _____, 20_____.

Dog Control Officer (Signature)

Name of Dog Control Officer (print)

Township Clerk or Designate (Signature)

**The Township of Cavan Monaghan
Part 1 Provincial Offences Act
Set Fine Schedule
By-law No. 2023-85: Dog Control**

The licencing and registration of dogs, and for prohibiting or regulating the running at large of dogs within the Township of Cavan Monaghan

Item	Column 1	Column 2	Column 3
	Short form Wording	Provision Creating or Defining Offence	Set Fine
1.	Failure to obtain a license	Section 2.1	\$100.00
2.	Failure to affix dog tag	Section 3.1	\$100.00
3.	Animal at large	Section 5.1	\$150.00
4.	Failure to leash a dog in public	Section 5.1	\$150.00
5.	Keep more than permitted number of dogs	Section 6	\$200.00
6.	Failure to comply with Muzzle Order/Order to Restrain	Section 11.3 (c)	\$350.00
7.	Failure to Clean Up Excrement	Section 13	\$100.00

Note: The general penalty provision for the offences listed above is Section 14 of By-law No. 2023-85 a certified copy of which has been filed, and s. 61 of the Provincial Offences Act, R.S.O. c.P.33, as amended.

The Township of Cavan Monaghan

By-law No. 2023-86

Being a by-law to confirm the proceedings of the regular meeting of the Council of the Township of Cavan Monaghan held on the 18th day of December 2023.

Whereas the Municipal Act, 2001, S.O., 2001, c.25, S.5, S. 8 and S. 11 authorizes Council to pass by-laws;

Now Therefore the Council of the Township of Cavan Monaghan hereby enacts as follows:

1. That the actions of the Council at its regular meeting held on the 18th day of December 2023, in respect to each recommendation and action by the Council at its said meetings except where prior approval of the Local Planning Appeal Tribunal or other statutory authority is required are hereby adopted ratified and confirmed.
2. That the Mayor and Clerk of the Township of Cavan Monaghan are hereby authorized and directed to do all things necessary to give effect to the said actions or obtain approvals where required, and to execute all documents as may be necessary and the Clerk is hereby authorized and directed to affix the Corporate Seal to all such documents. Read a first, second and third time and passed this 18th day of December 2023.

Matthew Graham
Mayor

Cindy Page
Clerk