



## Phase Two Environmental Site Assessment

1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

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On The Lake Developments Inc.

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Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

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## Table of Contents

1	Executive Summary .....	6
2	Introduction .....	10
	2.1 Site Description .....	10
	2.2 Legal Description and Property Ownership .....	10
	2.3 Current and Proposed Future Uses.....	11
	2.4 Applicable Site Condition Standards.....	11
3	Background Information.....	13
	3.1 Physical Setting .....	13
	3.2 Past Environmental Investigations .....	13
4	Scope of the Investigation .....	20
	4.1 Overview of Site Investigation .....	20
	4.2 Media Investigated .....	20
	4.3 Deviations from Sampling and Analysis Plan (SAAP) .....	21
	4.4 Impediments.....	21
5	Phase One Conceptual Site Model .....	22
6	Investigation Method .....	28
	6.1 General .....	28
	6.2 Drilling and Test Pitting Program.....	28
	6.3 Soil Sampling.....	28
	6.4 Field Screening Measurements .....	29
	6.5 Groundwater: Monitoring Well Installation .....	29
	6.6 Monitoring Well Development .....	30
	6.7 Groundwater Field Measurements of Water Quality Parameters .....	30
	6.8 Groundwater Sampling.....	31
	6.9 Sediment Sampling .....	31
	6.10 Analytical Testing.....	31
	6.11 Residue Management Procedures.....	31

6.12 Elevation Survey..... 31

6.13 Quality Assurance and Quality Control Measures ..... 32

7 Review and Evaluation..... 33

7.1 Geology ..... 33

7.1.1 Surficial Material ..... 33

7.1.2 Fill Material..... 33

7.1.3 Native Soils ..... 33

7.1.4 Bedrock ..... 33

7.2 Groundwater: Elevations and Flow Direction ..... 33

7.2.1 Groundwater: Hydraulic Conductivity ..... 34

7.2.2 Groundwater: Horizontal Hydraulic Gradients ..... 34

7.3 Soil Texture ..... 34

7.4 Soil Field Screening ..... 35

7.5 Soil Quality ..... 35

7.5.1 Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene,  
and Xylene (BTEX)..... 35

7.5.2 Volatile Organic Compounds (VOCs) ..... 35

7.5.3 Polycyclic Aromatic Hydrocarbons (PAHs)..... 35

7.5.4 Metals (including Hydride-Forming Metals) and Other Regulated  
Parameters (B-HWS, Cr (VI), Hg, CN) ..... 36

7.5.5 Electrical Conductivity and Sodium Adsorption Ratio ..... 36

7.5.6 Soil pH ..... 36

7.5.7 Polychlorinated Biphenyls (PCBs) ..... 36

7.5.8 Organochlorine Pesticides (OCPs) ..... 36

7.5.9 Chemical Transformation and Soil Contaminant Sources ..... 37

7.5.10 Evidence of Non-Aqueous Phase Liquid..... 37

7.6 Groundwater Quality ..... 37

7.6.1 Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene,  
and Xylene (BTEX)..... 37

7.6.2 Volatile Organic Compounds (VOCs) ..... 38



7.6.3 Polycyclic Aromatic Hydrocarbons (PAHs)..... 38

7.6.4 Metals (including Hydride-Forming Metals) and ORPs (including Cr(VI),  
CN- and Hg)..... 38

7.6.5 Sodium (Na) and chloride (Cl)..... 38

7.6.6 Chemical Transformation and Groundwater Contaminant Sources ..... 38

7.6.7 Evidence of Non-Aqueous Phase Liquid (NAPL) ..... 38

7.7 Sediment Quality ..... 39

7.8 Quality Assurance and Quality Control Results ..... 39

7.9 Phase Two Conceptual Site Model ..... 41

8 Conclusions ..... 42

9 General Limitations..... 44

10 Closure ..... 45

11 References ..... 46

**List of Appendices**

- Appendix A – Limitations and Use of Report
- Appendix B – Plan of Survey
- Appendix C – Qualification of Assessors
- Appendix D – Sampling and Analysis Plan
- Appendix E – Borehole Logs
- Appendix F – Quality Assurance and Quality Control Measures
- Appendix G – Laboratory Certificates of Analysis
- Appendix H – Phase Two Conceptual Site Model
- Appendix I – Grain Size Analysis
- Appendix J – Remediation Report
- Appendix K – Non-Potable Acceptance Letter



## List of Figures

Figure 1: Site Location Plan

Figure 2: Phase One Study Area, Surrounding Land Use and Potentially Contaminating Activities

Figure 3: Site Plan

Figure 4: Areas of Potential Environmental Concern (APECs)

Figure 5A: Borehole/Monitoring Well Location Plan

Figure 5B: Borehole/Monitoring Well Location Plan and APECs

Figure 5C: Remedial Excavation Area and Confirmatory Sampling Plan

Figure 6A: Groundwater Contour Plan – October 2024

Figure 6B: Groundwater Contour Plan – December 2024

Figure 7A: Soil Analytical Results – Petroleum Hydrocarbons (PHCs) including Benzene, Toluene, Ethylbenzene and Xylene (BTEX)

Figure 7B: Remedial Excavation: Petroleum Hydrocarbons (PHCs)

Figure 7C: Post-Remediation PHCs Soil Analytical Results – Petroleum Hydrocarbons (PHCs)

Figure 8: Soil Analytical Results – Volatile Organic Compounds (VOCs)

Figure 9: Soil Analytical Results – Polycyclic Aromatic Hydrocarbons (PAHs)

Figure 10: Soil Analytical Results – Metals (including hydride-forming metals) and ORPs (B-HWS, Cr (VI), Hg, CN-)

Figure 11: Soil Analytical Results – EC and SAR

Figure 12: Soil Analytical Results – Polychlorinated Biphenyls (PCBs)

Figure 13: Soil Analytical Results – Organochlorine Pesticides (OCPs)

Figure 14: Groundwater Analytical Results – Petroleum Hydrocarbons (PHCs) and BTEX

Figure 15: Groundwater Analytical Results – Volatile Organic Compounds (VOCs)

Figure 16: Groundwater Analytical Results – Polycyclic Aromatic Hydrocarbons (PAHs)

Figure 17: Groundwater Analytical Results – Metals (including hydride-forming metals) and ORPs (Cr (VI), Hg, CN-)

Figure 18: Groundwater Analytical Results – Sodium (Na) and Chloride (Cl)

Figure 19: Cross Section A-A'

Figure 19A: Cross Section A-A' – Soil Analytical Results – PHC and BTEX

Figure 19B: Cross Section A-A' – Groundwater Analytical Results – PHCs and BTEX

Figure 19C: Cross Section A-A' – Groundwater Analytical Results – VOCs

Figure 19D: Cross Section A-A' – Groundwater Analytical Results – PAHs

Figure 19E: Cross Section A-A' – Groundwater Analytical Results – Metals (including hydride-forming metals) and ORPs (Cr (VI), Hg, CN-)

Figure 20: Cross Section B-B'

Figure 20A: Cross Section B-B' – Soil Analytical Results – PHC and BTEX

Figure 20B: Cross Section B-B' – Groundwater Analytical Results – PHCs and BTEX

Figure 20C: Cross Section B-B' – Groundwater Analytical Results – VOCs

Figure 20D: Cross Section B-B' – Groundwater Analytical Results – PAHs

Figure 20E: Cross Section B-B' – Groundwater Analytical Results – Metals (including hydride-forming metals) and ORPs (Cr (VI), Hg, CN-)

Figure 21: Cross Section C-C'

Figure 21A: Cross Section C-C' – Soil Analytical Results – Metals (including hydride-forming metals) and ORPs (Cr (VI), Hg, CN-)

Figure 21B: Cross Section C-C' – Groundwater Analytical Results – Metals (including hydride-forming metals) and ORPs (Cr (VI), Hg, CN-)

Figure 22A: Pre-Remediation On and Off-Site Human Health Conceptual Site Model

Figure 22B: Post-Remediation On and Off-Site Human Health Conceptual Site Model

Figure 23A: Pre-Remediation On and Off-Site Ecological Conceptual Site Model

Figure 23B: Post-Remediation On and Off-Site Ecological Conceptual Site Model

## 1 Executive Summary

The executive summary is a brief synopsis of the report and should not be read in lieu of reading the report in its entirety. EXP Services Inc. (EXP) was retained by **On The Lake Developments** (the “Client”) to conduct a Phase Two Environmental Site Assessment (ESA) of the property located at 1544 & 1546 Four Mile Creek Road, in Niagara-on-the-Lake, Ontario and hereinafter referred to as the “Site”.

The Site is approximately 1.07 hectares (2.64 acres) in size and is currently occupied by a split-level residential home and a detached, formerly commercial garage. The Site was first developed for mixed commercial and residential use in the 1960s and historically has been used as a garage for construction and maintenance of marine vehicles. Two (2) underground storage tanks (USTs) are associated with the Site; one (1) historical UST located at the exterior of the garage, and one (1) present UST currently located at the north end of the residential building.

It is EXP’s understanding that the Client intends to re-develop the Site as mixed residential and commercial land use. Although conceptual plans were provided in draft at the time of this Phase Two ESA, it was assumed that two buildings would be constructed: a twenty-nine (29) unit, four (4) storey residential condominium and a two (2) storey commercial building with retail and office space. Two hundred (200) parking spaces are proposed, ninety-five (95) surface and one hundred and five (105) in P1 underground. The at-grade parking is proposed for the central portion of the Site, between the two proposed building structures. Based on the current and proposed land use of the Site, a Record of Site Condition (RSC) will be required. As such, the objective of the investigation was to support the filing of an RSC in accordance with O.Reg.153/04. The Phase Two ESA was conducted in accordance with the Phase Two ESA standard defined by O. Reg. 153/04, as amended; and in accordance with generally accepted professional practices. Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third-party beneficiaries are intended. Limitation of liability, scope of report and third-party reliance are outlined in Appendix A of this report.

The objective of the Phase Two ESA was to assess the areas of potential environmental concern (APECs) identified in the Phase One ESA completed by EXP, dated October 7, 2024 (EXP, 2024). The relevant APECs identified in the Phase One ESA are provided in the table below.

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA) <sup>1</sup>	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern <sup>2</sup>	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1: Former equipment and marine vehicle repairs	Central portion of the Site	PCA 1: #27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	On-Site	PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	Soil and Groundwater
APEC 2A: Importation of Fill Material	Northern portion of the Site	PCA 2: #30 - Importation of Fill Material of Unknown Quality	On-Site	PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B,	Soil

Phase Two Environmental Site Assessment  
 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 GTR-24000672-C0  
 November 7, 2024; Revised May 26, 2025

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA) <sup>1</sup>	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern <sup>2</sup>	Media Potentially Impacted (Groundwater, soil and/or sediment)
				Cr(VI), CN-, Hg, EC, SAR, PCBs	
APEC 2B: De-icing Activities	Northern portion of the Site	PCA 2B: #Other – De-icing Activities	On-Site	EC, SAR	Soil
APEC 3: Former USTs	South-Central portion of the Site	PCA 3: #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs, BTEX, VOCs, Metals, Sb, As, Se	Soil and Groundwater
APEC 4: Historical orchard/vineyard	Southern portion of the Site	PCA 4: #40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On-Site	OC Pesticides, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	Soil
APEC 5: Vent/fill pipes at residential structure	Southeastern portion of the Site	PCA 5: #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs, BTEX, PAHs, VOCs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	Soil and Groundwater

(1) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg.153/04, as amended) that is occurring or has occurred in a phase one Study area.

(2) PHCs – Petroleum Hydrocarbons; BTEX – Benzene, Toluene, Ethylbenzene, and Xylene; VOCs – Volatile Organic Compounds; PAHs – Polycyclic Aromatic Hydrocarbons; Metals – Metals (including Hydride Metals); ORPs – Other Regulated Parameters [EC - electrical conductivity; SAR - sodium adsorption ratio; Hg – mercury; CN – cyanide; B-HWS - boron (hot-water-soluble); CrVI - hexavalent chromium; and pH]; OC pesticides – Organochlorine pesticides; PCBs – polychlorinated biphenyls.

Based on the findings of the Phase One ESA and conclusions, a Phase Two ESA was recommended to assess the soil and groundwater conditions at the Site.

The results and findings of the Phase Two ESA conducted at the Site are summarized as follows:

- Between September 24 to 26, 2024 a total of eight (8) boreholes (BH1 to BH8) were advanced at the Site to a maximum depth of 11.28 metres below ground surface (mbgs) by a licensed well contractor, Terra Firma Environmental Services



Ltd. (Terra Firma), under the full-time supervision of EXP staff. Three (3) of the boreholes were instrumented with groundwater monitoring wells (BH3, BH4, and BH7), installed for environmental purposes. Please note that the drilling investigation was carried out as part of a combined geotechnical/environmental/hydrogeological investigation and that not all borehole locations were sampled for environmental purposes.

- The general stratigraphy at the Site was comprised of topsoil and/or granular fill, underlain by fill (silty clay to sandy silt fill), overlying native layers of silty clay, and sandy silt till (BH1). Fill material was encountered at all borehole locations, except for BH2 and BH3. Bedrock was not encountered at the borehole completion depths, to a maximum investigative depth of 11.28 mbgs.
- The monitoring well network advanced as part of this Phase Two ESA consisted of three (3) (BH3, BH4, and BH7) monitoring wells screened within the native soils. In addition, three (3) pre-existing wells (BH1-23, BH2-23, and BH5-23) installed during a previous investigation were used for groundwater monitoring.
- During the first groundwater monitoring event in October 2024 (round 1), only one (1) newly installed well (BH4) was accessible for groundwater monitoring due to the other two (2) (BH3 and BH7) being dry at the time of the investigation. The four (4) accessible monitoring wells were sampled by EXP on October 2, 2024. The measured depth of the groundwater table ranged from 0.41 (BH1-23) to 1.67 (BH2-23) mbgs during the October monitoring event; the calculated groundwater elevations ranged from 90.87 (BH2-23) to 92.24 (BH1-23) masl (metres above sea level).
- Supplemental groundwater sampling events were carried out on November 21 (round 2) and December 2, 2024 (round 3). Groundwater samples were obtained from previously inaccessible monitoring wells BH3 and BH7 on November 21, 2024, to assess APEC 5 (fill pipes at the north portion of the residential home on-Site), and horizontally delineate groundwater impacts, respectively. Supplemental groundwater samples were also obtained on November 21, 2024 from monitoring wells BH4, BH2-23 and BH5-23, to re-assess polycyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene, and xylenes (BTEX), and metals. On December 2, 2024, supplemental groundwater samples were obtained from BH3, BH4, BH7, BH2-23 and BH5-23 to further assess PAH, BTEX, and metals. All six (6) groundwater monitors were checked by EXP on December 2, 2024. The measured depth of the groundwater table from round 2 and 3 ranged from 0.7 (BH1-23/BH4) to 6.7 (BH3) mbgs; the calculated groundwater elevations ranged from 85.84 (BH3) to 91.94 (BH1-23) masl in the groundwater monitors.
- Based on the available groundwater depth measurements and the available groundwater monitors, a groundwater contour map was generated for the Site. Regional groundwater flow direction is inferred to be northwest. Localized flow conditions across the site indicate a groundwater flow to the north to northwest in the unconfined clayey silt to silty clay aquifer.
- The shallow horizontal hydraulic gradient on-Site was an average of 0.1 m/m to 0.01 m/m to the north to northwest, depending on the time of year.
- For assessment purposes, EXP selected the MECP (2011) Table 9: Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition (SCS) for Residential/Parkland/Institutional/Commercial/Community/Industrial (RPI/ICC) property use, and medium to fine textured soils (hereinafter referred to as the "Table 9 SCS").
- Soil samples were submitted for the analysis of PHCs, BTEX, volatile organic compounds (VOCs), PAHs, polychlorinated biphenyls (PCBs), organochlorine pesticides (OCPs), metals (including hydrides), and/or other regulated parameters (ORPs) (boron-hot water soluble (B-HWS), hexavalent chromium (Cr (VI)), mercury (Hg), cyanide (CN), electrical conductivity (EC), sodium adsorption ratio (SAR), pH). All soil parameters were either non-detect or detected below the applicable Table 9 SCS with the exception of EC and PHCs, as follows:

- Exceedances of PHC fraction F2 at BH4-SS3 (depth of 1.52 to 2.13 mbgs). A deeper sample from this location, BH4-SS7 (depth of 6.09 to 6.70 mbgs), was found to be within the Table 9 SCS for PHCs. Furthermore, this location was remediated in April of 2025.
- Exceedance of EC at BH5-SS1 (depth of 0.0 - 0.61 mbgs). A deeper sample from this location, BH5-SS7 (depth of 6.09 to 6.70 mbgs), was found to be within the Table 9 SCS for EC;
- A pH (surficial) outside of the range of 5-9 was identified in samples BH5-SS1 (depth of 0.0 to 0.61 mbgs) and BH1-SS1 (depth of 0.0 to 0.61 mbgs). However, three (3) additional soil samples (BH1A, BH1B, BH1C and BH5A, BH5B, BH5C) were obtained in the vicinity of these locations and from the same depth. When the logarithmic average was taken between the three (3) new samples and the original sample with elevated pH, the average was within 5-9. As such, the Site is not considered sensitive and the Table 9 SCS can be applied to the Site.
- Based on the reported analytical results, an exceedance of EC was identified at the Site. It is the Qualified Person's (QP's) opinion that the elevated concentration of EC is associated with de-icing and salting substances routinely applied on-site during the winter months for vehicular and pedestrian safety. Therefore, as per Section 49.1 (1) of O. Reg. 153/04, which references Section 2 of Ontario Regulation 339 of the Revised Regulations of Ontario, 1990 (Classes of Contaminants – Exceptions), it is in the QP<sub>ESA</sub>'s opinion that the elevated levels of EC are not exceedances of the applicable Table 9 SCS.
- A total of three (3) rounds of groundwater monitoring were completed. Monitoring occurred on October 2, 2024, November 21, 2024, and December 2, 2024 (round 1, round 2, round 3, respectively).
- Groundwater samples were submitted during the first round of groundwater monitoring for the analysis of PHCs, BTEX, VOCs, PAHs, metals (including hydrides) and ORPs (Cr (VI), Hg, CN, sodium (Na), chloride (Cl)) from newly installed and accessible monitoring well BH4, and pre-existing monitoring wells BH1-23, BH2-23, BH5-23. All groundwater parameters were either non-detect or detected below the applicable Table 9 SCS.
- Groundwater samples were submitted during the second round of groundwater monitoring for the analysis of PHCs, BTEX, VOCs, PAHs, metals (including hydrides) and ORPs (Cr (VI), Hg, CN, Na, Cl). Previously dry wells BH3 and BH7 were sampled during this event. Additionally, supplemental samples from BH4, BH2-23, and BH5-23 were obtained to assess PAHs, BTEX, and metals. All groundwater parameters were either non-detect or detected below the applicable Table 9 SCS.
- Groundwater samples were submitted during the third round of groundwater monitoring for the analysis of PAHs, BTEX, and metals from BH3, BH4, BH7, BH2-23, and BH5-23. All groundwater parameters were either non-detect or detected below the applicable Table 9 SCS.
- No evidence of free product (i.e. visible film or hydrocarbon sheen), or odour was observed during soil sampling, groundwater purging, or any of groundwater sampling events.

Soil in exceedance of the O. Reg. 153/04 Table 9 SCS for PHCs must be addressed prior to filing an RSC. These soils were remediated, as discussed in the remediation report provided in Appendix J.

Given the previously identified PHC soil exceedances have been remediated, an RSC can be filed for the Site.

## 2 Introduction

EXP Services Inc. (EXP) was retained by **On The Lake Developments** (the “Client”) to conduct a Phase Two Environmental Site Assessment (ESA) of the property located at the west side of Four Mile Creek and 15 metres northeast of Line 2 Road, at 1544 & 1546 Four Mile Creek Road, in Niagara-on-the-Lake, Ontario, hereinafter referred to as the “Site” (Figure 1).

This Phase Two ESA was conducted in accordance with the Phase Two ESA standard defined by Ontario Regulation 153/04, as amended (O.Reg.153/04); and in accordance with generally accepted professional practices. Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third-party beneficiaries are intended. Limitation of liability, scope of report and third-party reliance are outlined in Appendix A. Tables and Figures referenced throughout the report are provided at the beginning of the Appendices.

The Site is approximately 1.07 hectares (2.64 acres) in size and is currently occupied by a split-level residential home and a detached, formerly commercial garage. The Site was first developed for mixed commercial and residential use in the 1960s and historically has been used as a garage for construction and maintenance of marine vehicles. An underground storage tank (UST) was located at the exterior of the garage and west of the residential home.

It is EXP’s understanding that the Client intends to re-develop the Site as mixed residential and commercial land use. Although conceptual plans were provided in draft at the time of this Phase Two ESA, it was assumed that two buildings would be constructed: a twenty-nine (29) unit, four (4) storey residential condominium and a two (2) storey commercial building with retail and office space. Two hundred (200) parking spaces are proposed, ninety-five (95) surface and one hundred and five (105) in P1 underground. The at-grade parking is proposed for the central portion of the Site, between the two proposed building structures. Based on the current and proposed land use of the Site, a Record of Site Condition (RSC) will be required. As such, the objective of the investigation was to support the filing of an RSC in accordance with O.Reg.153/04. The objective of the Phase Two ESA was to assess the areas of potential environmental concern (APECs) identified in the Phase One ESA completed by EXP, dated October 7 (EXP, 2024).

### 2.1 Site Description

The Site is located at the west side of Four Mile Creek and 15 metres northwest of Line 2 Road in Niagara-on-the-Lake, Ontario (see Figure 1). The Site is approximately 1.07 hectares (2.64 acres) in size. At the time of the investigation, the Site consisted of one (1) residential structure in the southeastern portion and one (1) vacant garage structure (formerly used for marine vehicle repairs) in the central portion.

### 2.2 Legal Description and Property Ownership

The legal description and property ownership are as follows.

<b>Municipal Address(es)</b>	1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario
<b>Current Land Use</b>	Residential/Commercial
<b>Proposed Land Use</b>	Residential/Commercial
<b>Legal Description</b>	PT TWP LT 112 NIAGARA; PT RDAL BTN TWP LT 111 & 112 NIAGARA PT 1 30R668 & AS IN RO119545 EXCEPT PT 4 SPPL85; PT 2 30R668, RO164363, BLOCK 46831 S/T INTEREST OF THE MUNICIPALITY; NIAGARA-ON-THE-LAKE PT TWP LT 112 NIAGARA AS IN RO7678 EXCEPT HWY637; NIAGARA-ON-THE-LAKE
<b>Property Identification Number (PIN)</b>	46383-0086 (LT) 46383-0087 (LT)

<b>Approximate Universal Transverse Mercator (UTM) coordinates</b>	NAD83 17T 652530 m E 4786792 m N
<b>Accuracy Estimate of UTM</b>	10-15 m
<b>Measurement Method</b>	GPS
<b>Site Area</b>	1.07 hectares (2.64 acres)
<b>Property Owner</b>	Esfandiar Aghaei and On The Lake Developments Inc.
<b>Owner Contact Address</b>	Stephen Aghaei 3985 Highway 7 East, Suite 202 Markham, ON, L3R 2A2

A signed Plan of Survey, prepared by Dasha Page, O.L.S., by J.D. Barnes Limited, dated February 19, 2025, is included in Appendix B.

### 2.3 Current and Proposed Future Uses

At the time of the Site visit, the Site was occupied by a split-level residential home and a detached, formerly commercial garage. The remainder of the Site consisted of an asphalt parking lot and landscaped areas.

It is EXP's understanding that the Client intends to re-develop the Site as mixed residential and commercial land use. Although conceptual plans were provided in draft at the time of this Phase Two ESA, it was assumed that two buildings would be constructed: a twenty-nine (29) unit, four (4) storey residential condominium and a two (2) storey commercial building with retail and office space. Two hundred (200) parking spaces are proposed, ninety-five (95) surface and one hundred and five (105) in P1 underground. Theat-grade parking is proposed for the central portion of the Site, between the two proposed building structures. Based on the current and proposed land use of the Site, an RSC will be required. As such, the objective of the investigation was to support the filing of an RSC in accordance with O.Reg.153/04.

### 2.4 Applicable Site Condition Standards

Analytical results obtained for site soil and groundwater samples were assessed against Site Condition Standards (SCS) as established under subsection 169.4(1) of the Environmental Protection Act, and presented in the document MECP "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", ("SGWS" Standards), (MECP, 2011). Tabulated background SCS (Table 1) applicable to environmentally sensitive sites and effects based generic SCS (Tables 2 to 9) applicable to non-environmentally sensitive sites are provided in MECP (2011). The effects based SCS (Tables 2 to 9) are protective of human health and the environment for different groundwater conditions (potable and non-potable), land use scenarios (residential, parkland, institutional, commercial, industrial, community and agricultural/other), soil texture (coarse or medium/fine) and restoration depth (full or stratified).

Tables 1 to 9 of MECP Standards are summarized as follows:

- Table 1 – applicable to sites where background concentrations must be met (full depth), such as sensitive sites where site-specific criteria have not been derived;
- Table 2 – applicable to sites with potable groundwater and full depth restoration;
- Table 3 – applicable to sites with non-potable groundwater and full depth restoration;
- Table 4 – applicable to sites with potable groundwater and stratified restoration;
- Table 5 – applicable to sites with non-potable groundwater and stratified restoration;
- Table 6 – applicable to sites with potable groundwater and shallow soils;
- Table 7 – applicable to sites with non-potable groundwater and shallow soils;

- Table 8 – applicable to sites with potable groundwater and that are within 30 m of a water body; and,
- Table 9 – applicable to sites with non-potable groundwater and that are within 30 meters (m) of a water body.

For assessment purposes, EXP selected the MECP (2011) Table 9: SCS applicable to sites with non-potable groundwater and that are within 30 meters (m) of a water body for Residential/Parkland/Institutional/Commercial/Community/Industrial (RPI/ICC) property use, and medium to fine textured soils (hereinafter referred to as the “Table 9 SCS”). The selection of this category was based on the following factors:

- As per the requirements of Section 43.1 of O. Reg. 153/04, a property is considered to be a “shallow soil property” if 1/3 or more of the property consists of soil equal to or less than 2 m in depth beneath the soil surface. More than 1/3 of the boreholes advanced at the Site indicated an overburden thickness greater than 2 m, and as such, the Site is not considered as a “shallow soil property”;
- The Site was not considered as a sensitive Site as defined by O. Reg. 153/04 on the following basis:
  - The Site is located on or within 30 m of an area of natural significance as defined in O. Reg. 153/04. Based on the review of available resources from the Ministry of Natural Resources and Forestry website, a wetland is located northwest adjacent to the Site, extending slightly onto northern portion of the Site. The wetland is associated with Four Mile Creek. Based on discussions with Niagara Region, the wetland does not encroach onto and is not located within 30 m of the Site. Given their confirmation, it is not considered as part of the sensitivity of the Site.
  - Thirteen (13) surface soil samples and six (6) subsurface soil samples, including one (1) Quality Assurance and Quality Control (QA/QC) field duplicate (BH7-SS11 and BH7-S11-0), were submitted for pH analysis. The pH of all soil samples ranged from 6.87 to 11.4. A pH (surficial) outside of the range of 5-9 was identified in samples BH5-SS1 (depth of 0.0 to 0.61 mbgs) and BH1-SS1 (depth of 0.0 to 0.61 mbgs). However, three (3) additional soil samples (BH1A, BH1B, BH1C and BH5A, BH5B, BH5C) were obtained in the vicinity of these locations and from the same depth. When the logarithmic average was taken between the three (3) new samples and the original sample with elevated pH, the average was within 5-9 at both BH1 and BH5. As such, the 9 SCS can be applied to the Site; and,
  - The Site is located within 30 m of a water body.
- The stratigraphy of the Site predominantly consists of medium to fine textured soil, based on the borehole logs for the Site, where native soils were identified as silty clay to clayey silt;
- Based on the ERIS database records and Ontario Well Records, one (1) domestic well was identified within the study area. A non-potable request was submitted to the Niagara Region on April 22, 2025. On May 16, 2025, the Niagara Region issued an approval letter to apply non-potable SCS to the Site. A copy of the approval letter is provided in Appendix K.
- The Site is located within 30 m of a water body, Four Mile Creek located to the west.
- The Site is intended to be utilized for mixed residential and commercial land use, with residential land use as the most sensitive land use; and,
- There was no intention to carry out a stratified restoration at the Site.

## 3 Background Information

### 3.1 Physical Setting

The following physiographic, geological and soil maps were reviewed:

- Topographic Map available at the Natural Resources Canada (NRC) website <http://atlas.gc.ca/toporama/en/index.html>
- Make A Map: Natural Heritage Areas at Ontario Ministry of Natural Resources and Forestry website [https://www.lioapplications.lrc.gov.on.ca/Natural\\_Heritage/index.html?viewer=Natural\\_Heritage.Natural\\_Heritage&locale=en-CA](https://www.lioapplications.lrc.gov.on.ca/Natural_Heritage/index.html?viewer=Natural_Heritage.Natural_Heritage&locale=en-CA)
- "Quaternary Geology, Seamless coverage of the Province of Ontario"; Data Set 14 - Revised, Scale 1: 1,000,000 Issued 2000.
- "Bedrock Geology of Ontario, Southern Sheet," Ontario Geological Survey, MDR126-REV1. Scale 1:250,000. Issued 2011.
- 1876 Illustrated Historical Atlas of the Counties of Lincoln and Welland, Ont., Digital Library of McGill University.

Based on the review of the above maps, the following information was obtained:

- Based on the information available at this time, the direction of groundwater flow in the area of the Site is to the northwest. The Lower Virgil Reservoir is located approximately 5 metres west of the Site. The Lower Virgil Reservoir is part of the Four Mile Creek which is located approximately 10 metres northwest of the Site, and flows north towards Lake Ontario.
- Based on the review of available resources from the Ministry of Natural Resources and Forestry website, a wetland is located northwest adjacent to the Site, extending slightly onto the Site. The wetland is associated with the Four Mile Creek. Based on conversations with Niagara region, the wetland does not encroach onto and is not located within 30m of the Site.
- The Site and surrounding areas are dominated by Iroquois Plain deposits that consist predominantly of clay to silt-textured till (derived from glaciolacustrine deposits or shale) with Modern alluvial deposits consisting of clay, silt, sand, and gravel in the western-most portion of the Site.
- The bedrock in the general area of the Site is part of a group belonging to the Queenston Formation, primarily consisting of shale, limestone, dolostone and siltstone.
- Based on the Ontario Geological Survey (OGS) Bedrock Geology Database, depth to bedrock at the Site is approximately 19 metres below ground surface (mbgs).
- According to the historical map, the Site was located within the property owned by John A. Wilson and was used for agricultural purposes including an orchard/vineyard at the southern portion.
- According to Schedule C of the *Town of Niagara-on-the-Lake Official Plan (2017)*, the Site is listed as a Service Commercial Area and is adjacent to a Conservation Area. The Site is included in a Wetlands Area (including adjacent lands) but based on conversations with Niagara Region, the wetland does not encroach onto and is not located within 30m of the Site.

### 3.2 Past Environmental Investigations

The following reports were available for review at the time of this Phase Two ESA.

**Table 3.2: Previous Reports Summary**

Date	Report Title	Prepared For	Prepared By	Findings of Areas of Potential Environmental Concern
September 2021	<i>Phase I Environmental Site Assessment,</i>	Ball Land Developments	Englobe Corp.	<ul style="list-style-type: none"> <li>• The site is developed with a one story residential dwelling and one slab-on-grade building that is utilized as a former marine</li> </ul>

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

Date	Report Title	Prepared For	Prepared By	Findings of Areas of Potential Environmental Concern
	<i>1544 &amp; 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario</i>			<p>(boat) repair shop originally built circa 1950-1960s. The site is bordered by woodland, residential, and a creek reservoir, beyond which are industrial/commercial.</p> <ul style="list-style-type: none"> <li>• There are two USTs previously associated with the site, one (1) located southeast of the shop and one (1) west of the residential dwelling. Both USTs were determined to be potential environmental concerns (PCAs).</li> <li>• There were deleterious fill materials in piles at the northern portion of the site at the time of site visit. According to a site representative, the fill material in the form of slag from a nearby former General Motors plants was historically imported as fill material.</li> <li>• An environmental subsurface investigation to assess the quality of the soil and groundwater on the site was recommended.</li> </ul>
November 17, 2023	<i>Phase I-II Environmental Site Assessment, 1544 and 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario</i>	Andres Bell Construction Ltd.	Paterson Group	<ul style="list-style-type: none"> <li>• A Phase I ESA was completed for the property and adjacent properties.</li> <li>• The site was historically and currently used as a service garage for construction and marine vehicles.</li> <li>• The site has been noted for the presence of former USTs. There was also evidence of the importation of fill of poor quality.</li> <li>• Five (5) boreholes (BH1-23 to BH5-23) were advanced on the Phase II Property on September 25, 2023.</li> <li>• The soil and groundwater samples were compared to the MECP Table 8 Standards for a residential/parkland/institutional land use, which was deemed to be the appropriate site condition standards, at the time.</li> <li>• A total of five (5) soil samples were submitted to Parcel Laboratories for analysis of a combination of one or more of metals, pH, polycyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene, and xylenes (BTEX), and petroleum hydrocarbons (PHCs) fractions F1 to F4.</li> <li>• One of the analyzed soil samples (BH1-SS3) was found to have concentrations of PHC fractions F2, F3, and F4 above the acceptable Table 8 site standards.</li> <li>• Two of the boreholes (BH3-23 and BH4-23) were noted to have visual and olfactory signs of possible contamination found at 0.7 – 1.45 mbgs; however, no exceedances were identified.</li> </ul>

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

Date	Report Title	Prepared For	Prepared By	Findings of Areas of Potential Environmental Concern
				<ul style="list-style-type: none"> <li>Groundwater samples were recovered from two of the three monitoring wells (BH1-23 and BH5-23) on October 5, 2023.</li> <li>The groundwater samples were submitted to Parcel Laboratories for analysis of volatile organic compounds (VOCs) (including BTEX), PAHs, and PHCs.</li> <li>There were no groundwater exceedances identified above the selected MECP Table 8 standards.</li> <li>It was recommended that the impacted soil/fill does not pose a risk to the current on-site activities, however they do pose a liability to the property in the form of future cost to remediate and the future filing of an RSC.</li> <li>An assessment determined that future remediation would consist of the area around the former underground fuel storage tank and would generate approximately 70 m<sup>3</sup> of contaminated soil, and the area where imported fill was identified would generate approximately 1,000 m<sup>3</sup> to 1,600 m<sup>3</sup> of impacted fill material.</li> </ul>
<p>October 7, 2024</p>	<p>Phase One Environmental Site Assessment, 1544 &amp; 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario</p>	<p>On The Lake Developments Inc.</p>	<p>EXP Services Inc.</p>	<ul style="list-style-type: none"> <li>As the property is being developed to a more sensitive land use (from commercial to residential), a RSC in accordance with Ontario Regulation 153/04 will be required. The objective of the investigation was to support the filing of an RSC, and was completed in accordance with Ontario Regulation 153/04, as amended (O.Reg.153/04).</li> <li>Five (5) APECs were identified on the Site: 1. former equipment and marine vehicle repairs, 2. importation of fill material, 3. former USTs, 4. historical orchard/vineyard, and 5. vent/fill pipes at residential structure.</li> <li>A Phase Two ESA is required to investigate the APECs identified in this Phase One ESA prior to filing an RSC based on the proposed future land use.</li> </ul>
<p>November 7, 2024</p>	<p>Phase Two Environmental Site Assessment, 1544 &amp; 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario</p>	<p>On The Lake Developments Inc.</p>	<p>EXP Services Inc.</p>	<ul style="list-style-type: none"> <li>Between September 24 to 26, 2024 a total of eight (8) boreholes (BH1 to BH8) were advanced at the Site to a maximum depth of 11.28 mbgs by a licensed well contractor, Terra Firma Environmental Services Ltd. (Terra Firma), under the full-time supervision of EXP staff. Three (3) of the boreholes were instrumented with groundwater monitoring wells (BH3, BH4,</li> </ul>



Date	Report Title	Prepared For	Prepared By	Findings of Areas of Potential Environmental Concern
				<p>and BH7), installed for environmental purposes. Please note that the drilling investigation was carried out as part of a combined geotechnical/environmental/hydrogeological investigation and that not all borehole locations were sampled for environmental purposes.</p> <ul style="list-style-type: none"> <li>• For assessment purposes, EXP selected the MECP (2011) Table 1: Full Depth Background Site Condition Standards (SCS) for RPI/ICC property use, and medium to fine textured soils (hereinafter referred to as the “Table 1 SCS”).</li> <li>• Soil samples were submitted for the analysis of PHCs, BTEX, volatile organic compounds (VOCs), PAHs, polychlorinated biphenyls (PCBs), organochlorine pesticides (OCPs), metals (including hydrides), and/or other regulated parameters (ORPs) (boron-hot water soluble (B-HWS), hexavalent chromium (Cr (VI)), mercury (Hg), cyanide (CN), electrical conductivity (EC), sodium adsorption ratio (SAR), pH). All soil parameters were either non-detect or detected below the applicable Table 1 SCS with the exception of EC and PHCs, as follows:                         <ul style="list-style-type: none"> <li>○ Exceedances of PHC fraction F2 at BH4-SS3 (depth of 1.52 to 2.13 mbgs). A deeper sample from this location, BH4-SS7 (depth of 6.09 to 6.70 mbgs), was found to be within the Table 1 SCS for PHCs;</li> <li>○ Exceedance of EC at BH5-SS1 (depth of 0.0 - 0.61 mbgs). A deeper sample from this location, BH5-SS7 (depth of 6.09 to 6.70 mbgs), was found to be within the Table 1 SCS for EC;</li> </ul> </li> </ul>

Date	Report Title	Prepared For	Prepared By	Findings of Areas of Potential Environmental Concern
				<ul style="list-style-type: none"> <li>○ A pH (surficial) outside of the range of 5-9 was identified in samples BH5-SS1 (depth of 0.0 to 0.61 mbgs) and BH1-SS1 (depth of 0.0 to 0.61 mbgs). However, as the Table 1 SCS are applicable to the Site, these pH values are in line with the application of these standards.</li> <li>● Based on the reported analytical results, an exceedance of EC was identified at the Site. It is the Qualified Person’s (QP’s) opinion that the elevated concentration of EC is associated with de-icing and salting substances routinely applied on-site during the winter months for vehicular and pedestrian safety. Therefore, as per Section 49.1 (1) of O. Reg. 153/04, which references Section 2 of Ontario Regulation 339 of the Revised Regulations of Ontario, 1990 (Classes of Contaminants – Exceptions), it is in the QP<sub>ESA</sub>’s opinion that the elevated levels of EC are not exceedances of the applicable Table 1 SCS.</li> <li>● A total of three (3) rounds of groundwater monitoring were completed. Monitoring occurred on October 2, 2024, November 21, 2024, and December 2, 2024 (round 1, round 2, round 3, respectively).</li> <li>● Groundwater samples were submitted during the first round of groundwater monitoring for the analysis of PHCs, BTEX, VOCs, PAHs, metals (including hydrides) and ORPs from newly installed and accessible monitoring well BH4, and pre-existing monitoring wells BH1-23, BH2-23, BH5-23. All groundwater parameters were either non-detect or detected below the applicable Table 1 SCS with the exception of ethylbenzene, PAHs (anthracene, chrysene, phenanthrene,</li> </ul>

Phase Two Environmental Site Assessment  
 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 GTR-24000672-C0  
 November 7, 2024; Revised May 26, 2025

Date	Report Title	Prepared For	Prepared By	Findings of Areas of Potential Environmental Concern
				<p>pyrene), and metals (cobalt, nickel, selenium, and uranium), as follows:</p> <ul style="list-style-type: none"> <li>○ Ethylbenzene and PAH (anthracene, chrysene, phenanthrene, pyrene) exceedances above the Table 1 SCS were identified in BH4 (having a screen depth of 0.91 to 3.96 mbgs);</li> <li>○ Metals (cobalt, nickel, selenium, uranium) exceedances above the Table 1 SCS were identified in BH5-23 and its duplicate sample, BH5-23-0 (having a screen depth of 5.33 to 6.85 mbgs);</li> <li>○ Uranium exceedance above the Table 1 SCS were identified in BH2-23 (having a screen depth of 4.42 to 7.47).</li> </ul> <ul style="list-style-type: none"> <li>● Groundwater samples were submitted during the second round of groundwater monitoring for the analysis of PHCs, BTEX, VOCs, PAHs, metals (including hydrides) and ORPs. Previously dry wells BH3 and BH7 were sampled during this event. Additionally, supplemental samples from BH4, BH2-23, and BH5-23 were obtained to assess the previously identified exceedances for PAHs, BTEX, and metals. All groundwater parameters were either non-detect or detected below the applicable Table 1 SCS with the exception of metals (uranium and vanadium), as follows:             <ul style="list-style-type: none"> <li>○ Uranium exceedances above the Table 1 SCS were identified in BH5-23 (having a screen depth of 5.33 to 6.85), BH2-23 (having a screen depth of 4.42 to 7.47), BH3, BH7 and its duplicate BH7-</li> </ul> </li> </ul>



Date	Report Title	Prepared For	Prepared By	Findings of Areas of Potential Environmental Concern
				<p>0 (having screen depths of 4.57 to 7.62).</p> <ul style="list-style-type: none"> <li>○ A vanadium exceedance above the Table 1 SCS was identified in BH5-23 (having a screen depth of 5.33 to 6.85 mbgs).</li> <li>● Groundwater samples were submitted during the third round of groundwater monitoring for the analysis of PAHs, BTEX, and metals from BH3, BH4, BH7, BH2-23, and BH5-23. All groundwater parameters were either non-detect or detected below the applicable Table 1 SCS with the exception of metals (cobalt, uranium, and vanadium), as follows:                         <ul style="list-style-type: none"> <li>○ Uranium exceedances above the Table 1 SCS were identified in BH5-23 (having a screen depth of 5.33 to 6.85), BH3, BH7 and its duplicate BH7-0 (having screen depths of 4.57 to 7.62).</li> <li>○ A vanadium and cobalt exceedance above the Table 1 SCS was identified in BH5-23 (having a screen depth of 5.33 to 6.85 mbgs).</li> </ul> </li> <li>● Soil in exceedance of the O. Reg. 153/04 Table 1 SCS for PHCs and groundwater in exceedance of the Table 1 SCS for metals (cobalt, uranium and vanadium) must be remediated and/or risk assessed prior to filing an RSC. Furthermore, the identified groundwater impacts require vertical delineation of metals at BH2-23, BH5-23, BH3, and BH7.</li> </ul>

Based on the findings of the recent Phase One ESA and previous investigative work, PCAs were identified which result in APECs on the Site. The APECs and historical soil exceedances identified require further investigation, for the purpose of filing a RSC.



## 4 Scope of the Investigation

### 4.1 Overview of Site Investigation

The objective of this Phase Two ESA was to assess the APECs identified in the Phase One ESA (EXP, 2024), to characterize the Site. The scope of work for the Phase Two ESA was as follows:

- Preparation of a site-specific Health and Safety Plan;
- Requesting, obtaining, and reviewing public utility locates prior to the Phase Two investigation field work;
- Retaining a subcontractor to locate on-site private utility locates prior to the Phase Two investigation field work;
- Oversee a licensed drilling company to advance a total of eight (8) exterior boreholes (identified as BH1 to BH8) to a maximum depth of 11.28 mbgs. Please note that the drilling investigation was carried out as part of a combined geotechnical/environmental/hydrogeological investigation and that not all borehole locations were utilized for environmental purposes;
- Instrument three (3) of the boreholes with groundwater monitoring wells (BH3, BH4, and BH7);
- Inspecting soil and groundwater conditions and sampling new boreholes and new and existing monitoring wells;
- Field screening of all recovered soil samples for the presence of environmental impact (i.e. petroleum vapours, chemical staining, or odours);
- Submitting selected soil samples for laboratory analysis of the potential contaminants of concern (COCs), including PHCs, BTEX, VOCs, PAHs, metals, inorganic parameters, organochlorine pesticides (OCPs) and polychlorinated biphenyls (PCBs);
- Monitoring and measuring groundwater levels in the monitoring wells to determine groundwater elevations and groundwater flow direction;
- Submitting groundwater samples from select previously installed monitoring wells BH1-23, BH2-23, and BH5-23 and the newly installed monitoring wells BH3, BH4, and BH7 for laboratory analysis of the potential COC, including PHCs, BTEX, VOCs, PAHs, metals, and inorganic parameters;
- Conducting soil and groundwater sampling in accordance with the MECP Guidance on Sampling and Analytical Methods for Use at Contaminated Site in Ontario, dated December 1996;
- Following Standard Operating Procedures (SOPs), and Quality Assurance and Quality Control (QA/QC) measures to ensure defined quality standards were met;
- Determining the appropriate SCS in accordance with O. Reg. 153/04 and comparing the results of the soil and groundwater analyses to these Standards; and,
- Reviewing data from the previous investigations (Englobe, 2021; Paterson Group, 2023), documenting the results of the current investigation, and incorporating it as a part of the Phase Two ESA.

EXP personnel who conducted assessment work for this project included Ms. Amanda Catenaro (QP<sub>ESA</sub>), Ms. Kate Miles, and Ms. Jaimesyn Patterson. An outline of their qualifications is provided in Appendix C.

### 4.2 Media Investigated

The Phase Two ESA included the investigation of the Site soil and groundwater quality within the APECs, identified during the Phase One ESA (EXP, 2024). As there were no surface water bodies on the Site, sediment sampling was not required.

### 4.3 Deviations from Sampling and Analysis Plan (SAAP)

The field investigative, sampling program, and supplemental sampling program was carried out following the requirements of the Site Sampling and Analysis Plan (SAAP) in Appendix D.

Groundwater could not be sampled at monitoring wells BH3 and BH7 at the time of the first round of groundwater sampling. Both wells were dry during the October sampling event due to slow recharge of the silty clay to clayey silt they were installed in. During supplemental investigations on November 21 (Round 2) and December 2, 2024 (Round 3), groundwater samples were successfully obtained from monitoring wells BH3 and BH7. No additional deviations from the SAAP were reported that could affect the sampling and data quality objectives for the Site.

### 4.4 Impediments

The entire Site was accessible at the time of the investigation, and no physical impediments were encountered during the field investigation with the following exception:

The location and BH3 could not be advanced directly beside the on-Site residential dwelling at the southeastern corner of the Site due to the current occupancy. As such, BH3 was advanced to the north of the residential dwelling, but still within APEC 5 (vent pipes and a potential UST). As such, this impediment is not anticipated to affect the conclusions of the Phase Two ESA.

## 5 Phase One Conceptual Site Model

Following a review of the historical documentation, previous investigation, and the Site reconnaissance during the Phase One ESA, it is possible to formulate an initial Conceptual Site Model (CSM). The CSM is a simplification of reality, which aims to provide a description and assessment of any areas where a potentially contaminating activity (PCA) on or potentially affecting the Phase One property has occurred, and any COCs.

A CSM was developed based on the findings of the Phase One investigation, completed in accordance with O. Reg. 153/04.

The Site was first developed with a residential house in the northern portion and orchard or vineyard in the southern portion prior to 1876. A second residential dwelling was constructed circa 1956 in the southern portion of the Site (current residential structure at 1544 Four Mile Creek Road) and a garage structure (current structure at 1546 Four Mile Creek Road) was constructed in the northern portion circa 1964. The garage structure was used for equipment and marine vehicle repairs. The original residential house was demolished prior to 2000. The Site currently consists of one (1) residential structure in the southeastern portion and one (1) vacant garage structure (formerly used for marine vehicle repairs) in the central portion.

Nineteen (19) PCAs were identified within the Phase One Study Area (i.e. 250 metres from the property boundary). Six (6) on-Site PCAs were considered to result in APECs (the Site-specific PCA # is presented after the identified APEC below).

Refer to the table below and Figure 2 for the list of potentially contaminating activities (PCAs) that have occurred within the Phase One Study Area, which includes the Site and properties within 250 m radius of the Site boundaries.

PCA Identifier	Address	Location of Activity (in relation to Site) <sup>(1)</sup>	Potentially Contaminating Activity (PCA) <sup>(2)</sup>	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
<b>Site (On-Site PCAs)</b>					
1	1544 Four Mile Creek Road	On-Site	#27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Based on the previous report and city directories, a marine repair shop operated in the on-Site garage from approximately 1964 until 2023.	Yes
2A	1544 Four Mile Creek Road	On-site	#30 - Importation of Fill Material of Unknown Quality	Based on the previous report, slag from the former General Motors Plant was historically imported to the northern portion of the Site.	Yes
2B	1544 Four Mile Creek Road	On-site	#Other – De-icing Activities	De-icing activities have likely occurred along roadways, driveways, the parking spots and pathways at the Site.	Yes

Phase Two Environmental Site Assessment  
 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 GTR-24000672-C0  
 November 7, 2024; Revised May 26, 2025

PCA Identifier	Address	Location of Activity (in relation to Site) <sup>(1)</sup>	Potentially Contaminating Activity (PCA) <sup>(2)</sup>	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
3	1544 & 1546 Four Mile Creek Road	On-Site	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Based on the previous report, two (2) USTs were reportedly historically located southeast of the garage structure and west of the residential building.	Yes
4	1544 & 1546 Four Mile Creek Road	On-Site	#40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	Based on 1876 historic map, an orchard/vineyard was located at the southern portion of the Site.	Yes
5	1546 Four Mile Creek Road	On-Site	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Based on the previous report and current site inspection, vent/fill pipes were observed at the northern portion of the residential house, indicating a potential fuel oil AST/UST.	Yes
<b>Surrounding Properties (Off-Site PCAs)</b>					
6	n/a	30 metres east	#40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	Based on the aerial photographs, an orchard/vineyard was located east of the Site.	No, based on the cross-gradient location relative to the Site.
7	1579 Four Mile Creek Road	40 metres north	#40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing,	Based on the ERIS report and city directories, Niagara Fruit & Vegetable Growers Ltd. was listed as a wholesale pesticide vendor, and was	No, based on the cross-gradient location relative to the Site.

Phase Two Environmental Site Assessment  
 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 GTR-24000672-C0  
 November 7, 2024; Revised May 26, 2025

PCA Identifier	Address	Location of Activity (in relation to Site) <sup>(1)</sup>	Potentially Contaminating Activity (PCA) <sup>(2)</sup>	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
			Processing, Bulk Storage and Large-Scale Applications	located at the property between 2006 and 2023.	
8a	1593 Four Mile Creek Road	70 metres northeast	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Based on the ERIS report, The Town of Niagara-on-the-Lake Works yard is registered as a private fuel outlet with two (2) gasoline USTs and one (1) diesel UST.	No, based on the cross-gradient location relative to the Site.
8b	3 Lorraine Street	70 metres northeast	#other - spill	Based on the ERIS report, two spills occurred at the Town Works Yard; an unknown volume of gasoline in 2008 and 50 litres of diesel in 1988.	No, based on the cross-gradient location relative to the Site.
8c	1593 Four Mile Creek Road/3 Lorraine Street	70 metres northeast	#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the ERIS report, this property was listed as a waste generator for the Town Works Yard (believed to be related to equipment repair activities) since 1986.	No, based on the cross-gradient location relative to the Site.
9	1593 Four Mile Creek Road	70 metres northeast	#58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners.	Based on the ERIS report, this property was listed as a waste generator for a waste collection operation since 2007.	No, based on the cross-gradient location relative to the Site.
10a	1487 Niagara Stone Road	145 metres north	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Based on the ERIS report and city directories, a gasoline station has been located at this property since 1988.	No, based on the cross-gradient location relative to the Site.

PCA Identifier	Address	Location of Activity (in relation to Site) <sup>(1)</sup>	Potentially Contaminating Activity (PCA) <sup>(2)</sup>	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
10b	Corner of Lorraine Road and Four Mile Creek Road	145 metres north	#other - spill	Based on the ERIS report, a gasoline spill of unknown volume occurred at the property.	No, based on the cross-gradient location relative to the Site.
10c	Lorraine Road and Four Mile Creek Road	145 metres north	#other - spill	Based on the ERIS report, a mercury spill occurred at this property.	No, based on the cross-gradient location relative to the Site.
11	7 Henegan Road, Niagara-On-The-Lake	155 meters west	#27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Based on the city directories, Whirlpool Jet Boat Tours has been located at the property since 2006. There is potential for boat maintenance and repair activities in the building.	No, based on the cross-gradient location relative to the Site.
12	11 Henegan Road, Niagara-On-The-Lake	160 metres west	#59 - Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Based on the city directories, multiple woodworking companies have been located at the property since 2006.	No, based on the downgradient location relative to the Site.
13	13 Henegan Road, Niagara-On-The-Lake	165 metres southwest	#59 - Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Based on the city directories, multiple woodworking companies have been located at the property since 2009.	No, based on the downgradient location relative to the Site.
14	15 Henegan Road, Niagara-On-The-Lake	220 metres southwest	#59 - Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Based on the city directories, Millbrook Cabinetry Inc. has been located at the property since 2006.	No, based on the downgradient location relative to the Site.

(1) Distances are approximate. Precise distances are not possible due to the age of some listings and the aggregation and/or loss of addresses.

(2) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg 153/04, as amended) that is occurring or has occurred in a phase one Study area.

Based on the evaluation of the PCAs located within the Phase One Study Area, the following areas of potential environmental concern (APECs) were identified, as presented in Figure 4 and the table below.

Area of Potential Environmental Concern (APEC) <sup>1</sup>	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA) <sup>2</sup>	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1: Former equipment and marine vehicle repairs	Central portion of the Site	PCA 1: #27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	On-Site	PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	Soil and Groundwater
APEC 2: Importation of Fill Material	Northern portion of the Site	PCA 2: #30 - Importation of Fill Material of Unknown Quality	On-Site	PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg, EC, SAR, PCBs	Soil
APEC 2B: De-icing Activities	Northern portion of the Site	PCA 2B: #Other – De-icing Activities	On-Site	EC, SAR	Soil
APEC 3: Former USTs	Central portion of the Site	PCA 3: #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs, BTEX, VOCs, Metals, Sb, As, Se	Soil and Groundwater
APEC 4: Historical orchard/vineyard	Southern portion of the Site	PCA 4: #40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On-Site	OCPs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	Soil
APEC 5: Vent/fill pipes at residential structure	Central portion of the Site	PCA 5: #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs, BTEX, PAHs, VOCs	Soil and Groundwater

(1) Area of Potential Environmental Concern means the area on, in or under a phase one study area where one or more contaminants are potentially present, as determined through the PI ESA, including through (a) identification of post or present uses on, in or under the phase one property, and (b) identification of potentially contaminating activities.

(2) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg.153/04, as amended) that is occurring or has occurred in a phase one Study area.

PHCs – Petroleum Hydrocarbons; BTEX – Benzene, Toluene, Ethylbenzene, and Xylene; VOCs – Volatile Organic Compounds; PAHs – Polycyclic Aromatic Hydrocarbons; Metals – Metals (including Hydride Metals); ORPs – Other Regulated Parameters [EC - electrical conductivity; SAR - sodium adsorption ratio; Hg – mercury; CN – cyanide; B-HWS – boron (hot-water-soluble); CrVI - hexavalent chromium; and pH]; OC pesticides – Organochlorine pesticides; PCBs – polychlorinated biphenyls.

Based on the ministry of Natural Resources and Forestry's "Make a Map: Natural Heritage Areas", the site is located within 30m of the following:

- A wetland is located northwest adjacent to the Site, extending slightly onto the Site. The wetland is associated with the Four Mile Creek. Based on the Ministry of Natural Heritage it is confirmed to be a non-provincially significant wetland.

According to Schedule C of the *Town of Niagara-on-the-Lake Official Plan (2017)*, the Site is listed as a Service Commercial Area and is adjacent to a Conservation Area. The Site is included in a Wetlands Area (including adjacent lands). According to Part 3 – Land Use Policies, the Four Mile Creek estuary is understood to be a provincially significant wetland. However, Niagara Peninsula Conservation Authority has confirmed that no wetland is present within the Site boundaries.

The following physiographic, geological and soil maps were reviewed:

- Topographic Map available at the Natural Resources Canada (NRC) website <http://atlas.gc.ca/toporama/en/index.html>
- Make A Map: Natural Heritage Areas at Ontario Ministry of Natural Resources and Forestry website [https://www.lioapplications.lrc.gov.on.ca/Natural\\_Heritage/index.html?viewer=Natural\\_Heritage.Natural\\_Heritage&locale=en-CA](https://www.lioapplications.lrc.gov.on.ca/Natural_Heritage/index.html?viewer=Natural_Heritage.Natural_Heritage&locale=en-CA)
- "Quaternary Geology, Seamless coverage of the Province of Ontario"; Data Set 14 - Revised, Scale 1: 1,000,000 Issued 2000.
- "Bedrock Geology of Ontario, Southern Sheet," Ontario Geological Survey, MDR126-REV1. Scale 1:250,000. Issued 2011.
- 1876 Illustrated Historical Atlas of the Counties of Lincoln and Welland, Ont., Digital Library of McGill University.

Based on the review of the above maps, the following information was obtained:

- Based on the information available at this time, the direction of groundwater flow in the area of the Site is to the northwest. The Lower Virgil Reservoir is located approximately 5 metres west of the Site. The Lower Virgil Reservoir is part of Four Mile Creek which is located approximately 10 metres northwest of the Site, and flows north towards Lake Ontario.
- Based on the review of available resources from the Ministry of Natural Resources and Forestry website on September 17, 2024, a wetland is located northwest adjacent to the Site, extending slightly onto the Site. The wetland is associated with the Four Mile Creek. Based on the *Town of Niagara-on-the-Lake Official Plan (2017)*, this is understood to be a provincially significant wetland.
- The Site and surrounding areas are dominated by Iroquois Plain deposits that consist predominantly of clay to silt-textured till (derived from glaciolacustrine deposits or shale) with Modern alluvial deposits consisting of clay, silt, sand, and gravel in the western-most portion of the Site.
- The bedrock in the general area of the Site is part of a group belonging to the Queenston Formation, primarily consisting of shale, limestone, dolostone and siltstone.
- Based on the OGS Bedrock Geology Database, depth to bedrock at the Site is approximately 19 mbgs.
- According to the historical map, the Site was located within the property owned by John A. Wilson and was used for agricultural purposes including an orchard/vineyard at the southern portion.

The investigation undertaken by EXP with respect to this report and any conclusions or recommendations made in this report reflect EXP's judgement based on the site conditions observed at the time of the site inspection on the date(s) set out in this report and on information available at the time of preparation of this report. EXP has confirmed neither the completeness nor the accuracy of the records that were provided by others; as such, the historical records review is identified as a potential source of uncertainty during the investigation. The CSM is developed using multiple lines of evidence, searches and source information to make every reasonable attempt to ensure that findings of environmental significance are captured.

Any uncertainty or absence of information in the records review, interviews, and site reconnaissance components of the Phase One investigation are not anticipated to materially affect the validity of the CSM or Phase One conclusions.

## 6 Investigation Method

### 6.1 General

EXP performed the Phase Two ESA following the requirements of O. Reg. 153/04, Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario (MECP, 1996), and in accordance with generally accepted professional practices.

EXP followed standard operating procedures (SOPs) and QA/QC measures to ensure defined quality standards were met.

### 6.2 Drilling and Test Pitting Program

Prior to the commencement of drilling activities, the locations of underground utilities including cable, telephone, natural gas, electrical lines, as well water, sewer, storm water and sanitary lateral conduits were marked out by public locating companies. In addition, a private utility locating service was also retained to clear the individual borehole locations.

Between September 24<sup>th</sup> and September 26<sup>th</sup>, a total of eight (8) boreholes (BH1 to BH8) were advanced at the Site to a maximum depth of 11.28 mbgs by a licensed well contractor, Terra Firma Environmental Services Ltd. (Terra Firma), under the full-time supervision of EXP staff. Three (3) of the boreholes were instrumented with a groundwater monitoring well (BH3, BH4, and BH7).

The location of the boreholes and monitoring wells are shown in Figure 5A.

Soil samples were collected as the drilling progressed and were examined for geologic information and for physical evidence of chemical impact. One worst-case soil sample was selected from the boreholes for laboratory analysis. The soil samples selected for laboratory analysis were immediately placed into laboratory prepared glass jars, labelled, and stored in a cooler with ice at less than 10°C. Typically, a deeper soil sample was collected, preserved, and submitted for analysis for vertical delineation purposes if the worst-case soil sample was found to exceed the applicable Standards for any of the parameters analyzed. Field duplicate samples were collected for QA/QC purposes during the soil sampling.

EXP continuously monitored the drilling activities to record the physical characteristics of soil, depth of soil sample collection and total depth of boreholes. Field observations are summarized on the borehole logs provided in Appendix E. Representative soil samples were recovered from the boreholes using split spoon sampling.

### 6.3 Soil Sampling

The soil sampling conducted during the completion of this Phase Two ESA was undertaken in accordance with the SAAP presented in Appendix D, to ensure that soil quality in the APECs identified in the Phase One ESA were characterized in accordance with O. Reg. 153/04.

Soil samples for geologic characterization and chemical analysis were collected on a continuous basis in the overburden materials using sampling equipment advanced from grade surface to maximum termination depth of 11.28 mbgs. The soil cores were extracted from the samplers upon retrieval by drilling personnel. Geological details of the recovered cores were logged by EXP field staff and samples were collected from selected cores samples for chemical analysis. Field observations are summarized on the borehole logs provided in Appendix E.

Measures were taken in the field and during transport to preserve sample integrity prior to chemical analysis. Recommended volumes of soil samples selected for chemical analysis were collected from the recovered cores into pre-cleaned, laboratory-supplied glass sample jars/vials identified for the specified analytical test group. Samples intended for PHC fraction F1 and VOCs were collected using a laboratory-supplied soil core sampler or syringe, placed into the vials containing methanol for preservation purposes and sealed using Teflon lined lids.

Soil samples selected for laboratory analysis were placed in clean coolers containing ice prior to and during transportation to the subcontract, AGAT Laboratories (AGAT) of Mississauga, Ontario. The samples were transported/submitted within the acceptable holding time to AGAT following Chain of Custody protocols for chemical analysis.

Decontamination and other protocols were followed during sample collection and handling to minimize the potential for sample cross-contamination. New disposal nitrile gloves were used for the handling and sampling of each retrieved soil core. The sampling equipment (i.e. split spoon, trowel) was decontaminated between monitoring well/test hole locations by the drilling contractor using a potable water/phosphate-free detergent solution followed by rinses with potable water and de-ionized water. Wash and rinse waters were disposed of on the ground. Soil cuttings from the drilling investigation were placed in labeled, sealed drums upon completion of the sampling. The drums are to be disposed of by a licensed private contractor upon completion of the on-Site activities.

Soil samples submitted for specific chemical analysis were selected on the basis of visual inspection, RKI Eagle readings, sample location and/or depth interval.

## 6.4 Field Screening Measurements

Readings of the petroleum vapour concentrations in soil samples collected during the drilling investigation were measured using an RKI Instruments Eagle 2, if there were sufficient recovery. This instrument is designed to detect and measure concentrations of combustible gas in the atmosphere. It is equipped with two ranges of measurement, reading concentrations in parts per million by volume (ppmv) or in percentage lower explosive limit (LEL). The RKI Eagle 2 instrument can determine combustible vapour concentrations in the range equivalent to 0 ppmv to 11,000 ppmv of hexane, with the latter number equaling 100% LEL for hexane. The instrument was configured to eliminate any response from methane for all sampling conducted at the Site. Instrument calibration is checked on a daily basis in the LEL range using standard gases comprised of a known concentration of hexane in air. If the instrument readings are within  $\pm 10\%$  of the standard gas value, then the instrument is deemed to be calibrated, however if the readings are greater than  $\pm 10\%$  of the standard gas value then the instrument is re-calibrated prior to use. The vapour concentrations are accurate to within  $\pm 5\%$  of reading or  $\pm 2\%$  LEL (whichever is greater) in the 0-100% LEL range and to within  $\pm 50$  ppm or  $\pm 10\%$  of reading (whichever is greater) in the 0-50,000 ppm range.

The measured petroleum vapours were detected up to a maximum reading of 620 ppm in samples where there was sufficient recovery to perform vapour measurements. Sample selection for laboratory analysis was determined based on visual observation, odour, and petroleum vapour readings from the RKI Eagle 2.

The field screening measurements, in parts per million (ppm) isobutylene and hexane equivalents, are presented on the borehole logs in Appendix E. It should be noted that field measurements are for screening purposes only and the presence/ absence of contamination is determined by laboratory analysis.

Each sample was additionally examined for visual, textural and olfactory classification at the time of sampling.

## 6.5 Groundwater: Monitoring Well Installation

Three (3) boreholes (identified as BH3, BH4, and BH7) advanced at the Site were instrumented with monitoring wells. The monitoring wells were installed in general accordance with the Ontario Water Resources Act – R.R.O. 1990, Regulation 903 – amended to O. Reg. 128/03, and were installed by Terra Firma, a licensed well contractor using a track-mounted drill rig between September 24 and 26, 2024.

The monitors were constructed from 50 millimetre diameter threaded Schedule 40 PVC pipe with a slot size of 0.01 inches and 2 threads per inch (TPI). The lower section of pipe is slotted above and below the water table. The upper section of the pipe is solid. The lower part of the annulus of the hole was backfilled with silica sand up to approximately 0.3 or 0.6 metres above the top of the slotted section. A bentonite seal, a minimum of 0.6 metres thick was placed above the sand to just below grade.

Bentonite and concrete were used to seal the monitors at grade. Each monitor is equipped with a protective flush-mount casing and locking lid.

EXP continuously monitored the well installation activities. Well installation details are summarized in borehole logs provided in Appendix E.

When the monitoring wells are no longer required, they must be decommissioned in accordance with the procedure outlined in the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - amended to O. Reg. 128/03.

Proper field sampling procedures as documented in Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario (MOE, 1996), including decontamination of sampling equipment, were followed to minimize the potential for cross-contamination. Measures taken to minimize the potential for cross contamination or the introduction of contaminants during well construction included:

- The use of well pipe components (e.g. riser pipe and well screens) with factory machined threaded flush coupling joints;
- Construction of wells without the use of glues or adhesives;
- Removing the protective plastic wraps from well components at test hole insertion to prevent contact with the ground and other surfaces; and,
- Cleaning of augers between sampling locations.

The location of the groundwater monitors is shown in Figure 5A.

## 6.6 Monitoring Well Development

Following the installation of monitoring wells, the monitoring wells were developed to remove fine sediment particles from the sand pack and enhance hydraulic communication with the surrounding formation waters.

The monitors were developed by removing a minimum of three well volume equivalents of groundwater or purging to dryness using a dedicated bailer. Purge water was examined for any liquid petroleum hydrocarbon sheen or odour. Purge water was collected and stored on-Site in labeled, sealed containers, until properly managed or disposed off-Site.

Well purging details were documented on a log sheet or in a bound hard cover notebook.

## 6.7 Groundwater Field Measurements of Water Quality Parameters

Immediately prior to collecting the groundwater samples, the wells were purged in accordance until field stabilization parameters indicated that stable aquifer conditions had been reached. The peristaltic pump was then used to collect the groundwater samples with low-flow sampling techniques.

Water quality parameters (pH, specific conductance (EC), total dissolved solids (TDS), oxidation-reduction potential (OP), and temperature) were measured using a HI 991301 pH/EC/TDS Multi-parameter Meter. The pH (two-point calibration) and EC are calibrated prior to use. The meter detects pH in the range of 0.00 to 14.00  $\pm 0.01$  pH, EC from 0 to 3,999  $\mu\text{S}/\text{cm}$   $\pm 2\%$  full scale (F.S.), TDS from 0 to 2,000 ppm (mg/L)  $\pm 2\%$  F.S., and temperature from 0.0 to 60.0°C  $\pm 0.5$ °C.

All development and purged water were collected and stored on-Site in labeled, sealed containers, until properly managed or disposed off-Site. Water quality parameters were recorded on log sheets or in a bound field book.

## 6.8 Groundwater Sampling

Groundwater sampling was conducted at the three (3) newly installed monitoring wells (BH3, BH4, and BH7) and three (3) pre-existing wells (BH1-23, BH2-23, and BH5-23). During the first groundwater monitoring event in October 2024 (round 1), only one (1) newly installed well (BH4) was accessible for groundwater monitoring due to the other two (2) (BH3 and BH7) being dry at the time of the investigation. The newly installed wells BH3 and BH7 were dry during the initial October sampling event, however they were able to be sampled during both supplemental sampling events on November 21 (round 2) and December 2, 2024 (round 3). All six (6) monitoring wells were successfully sampled across investigation events.

Recommended groundwater sample volumes were collected into pre-cleaned laboratory-supplied vials or bottles provided with analytical test group specific preservatives, as required. The samples were placed in an insulated cooler pre-chilled with ice at less than 10°C immediately upon collection. Samples for VOCs and/or PHC F1 analysis were collected in triplicate vials prepared with concentrated sodium bisulphate as a preservative. Each VOC/PHC vial was inverted and inspected for gas bubbles prior to being placed in the cooler to ensure that no head-space was present in the samples. Samples for Inductively Coupled Plasma Mass Spectrometry (ICPMS) metals were collected using disposable 0.45 micron field filters.

The groundwater samples were assigned a unique identification number, and the date, time, project number, company name, location and requested analyses were documented in a bound hard cover notebook. All groundwater samples were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratories, AGAT. The samples were transported/submitted following appropriate holding time requirements following Chain of Custody protocols for chemical analysis.

Decontamination and other protocols were followed during sample collection and handling to minimize the potential for sample cross-contamination. New disposable nitrile gloves were used at each monitoring well location.

Appropriate QA/QC samples were collected during groundwater sampling, including field duplicate samples and trip blanks, where required.

## 6.9 Sediment Sampling

As no water body was present at the Site, sediment sampling was not undertaken during the Phase Two ESA.

## 6.10 Analytical Testing

All laboratory analyses were completed by AGAT, accredited laboratories located in Mississauga, Ontario. AGAT performed the work following formal written methods and procedures. These methods include all the minimum requirements as specified in the document entitled *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act* (March 9, 2004, amended as of July 1, 2011).

## 6.11 Residue Management Procedures

Multiple drums of soil cuttings and purge water generated during the drilling/groundwater sampling activities are temporarily stored on-Site in sealed containers.

## 6.12 Elevation Survey

An elevation survey was conducted by EXP between September 24 to 26, 2024, for the boreholes advanced in 2024, with the purpose of obtaining relative vertical control of the newly installed and existing monitoring well locations. The elevations are recorded in the borehole logs in Appendix E.

A summary of the ground surface elevation for each monitoring well is provided in Table 3.

### 6.13 Quality Assurance and Quality Control Measures

QA/QC, as set out in the Sampling and Analysis Plan, were implemented during sample collection, storage and transport to provide accurate data representative of conditions in the surficial fill and upper overburden soils and the water table aquifer. The QA/QC measures included decontamination procedures to minimize the potential for sample cross contamination, the execution of standard operating procedures to collect representative and unbiased samples, the collection of quality control samples to evaluate sample precision and accuracy, and the implementation of measures to preserve sample integrity.

Decontamination protocols were followed during sample collection and handling to minimize the potential for cross-contamination. During the collection of soil samples, split spoon samplers were scraped and decontaminated between monitoring wells by washing with a potable water/phosphate-free detergent solution followed by a rinse with potable water. New disposable nitrile gloves were used for the handling and collection of samples from each soil core.

Soil samples selected for chemical analyses were collected from the retrieved soil cores and placed directly into pre-cleaned, laboratory-supplied glass jars or vials. Sample volumes were consistent with analytical test group requirements as specified by the receiving laboratory.

The groundwater samples were collected into pre-clean laboratory-supplied vials or bottles provided with analytical test group specific preservatives, as required. Recommended analytical test group specific sample volumes were collected as specified by the contractual laboratory. Sample vials for analysis of VOCs were inspected for the presence of gas bubbles and the presence of head space, where volatiles may partition into.

Measures were followed to preserve sample integrity between collection and receipt by the contractual laboratory. All samples, both soil and groundwater, immediately upon collection were placed in insulated coolers pre-chilled with ice for storage and transport to the contractual laboratory. Samples were received by the contractual laboratory within specific analytical test group holding time requirements.

Documentation procedures were followed to confirm sample identification and tracked sample movement. Each sample was assigned a unique identification ID number, which was recorded along with the date, time of sampling and requested analyses on labels affixed to the sampling containers, and in a bound field notebook. Chain of Custody protocols were followed to track sample handling and movement until receipt by the contractual laboratory.

A total of two (2) trip blank samples were submitted for groundwater sampling programs completed on October 2, 2024 (round 1), and November 21, 2024 (round 2).

All field instruments are calibrated on a daily basis, prior to use, as described in Sections 6.4 and 6.7.

## 7 Review and Evaluation

### 7.1 Geology

The soil investigation conducted at the Site consisted of the advancement of eight (8) boreholes, to a maximum depth of 11.28 mbgs, as part of the current investigation.

The borehole logs describing geologic details of the soil cores recovered during the Site drilling activities are presented in Appendix E. Boundaries of soil indicated on the log sheets are intended to reflect transition zones for the purpose of environmental assessment and should not be interpreted as exact planes of geological change.

The general stratigraphy at the Site, as observed in the boreholes, consists of topsoil or granular fill, underlain by silty clay to sandy silt fill, overlying native layers of clayey silt, and silty clay till (BH1). Bedrock was not encountered at the borehole completion depths, to a maximum investigative depth of 11.28 mbgs. A brief description of the soil stratigraphy at the Site, in order of depth, is summarized in the following sections. Refer to borehole logs provided in Appendix E for details of soil stratigraphy.

#### 7.1.1. Surficial Material

Surficial topsoil was encountered at BH2, BH3, BH4, BH5, BH7, and BH8, with a thickness ranging from 50 to 150 mm. BH7 encountered approximately 200 mm of granular fill beneath the surficial topsoil layer.

BH1 and BH6 were advanced in the gravel driveway and encountered approximately 250 and 450 mm of surficial granular fill.

The granular fill typically consisted of crushed limestone.

#### 7.1.2. Fill Material

Fill material was encountered at all borehole locations beneath the surficial material, except for BH2 and BH3, extending from approximately 0.8 to 9.14 mbgs. Fill material consisted of silty clay, gravelly sand, silty sand, or sandy silt, and was noted to contain trace to some organics, trace wood, brick, and asphalt fragments, and deleterious materials.

#### 7.1.3. Native Soils

A native deposit of silty clay was encountered at all borehole locations except for BH1, where a native sandy silt was encountered under the fill, extending from 9.14 to the borehole termination depth of 11.28 mbgs. Native silty clay was encountered directly below topsoil at BH2 and BH3, extending from approximately 0.5 to the borehole termination depth of 8.2 mbgs, and was encountered at depths ranging from 0.75 to 7.6 mbgs in BH4, BH5, BH6, BH7, and BH8.

All boreholes were terminated in native material at depths ranging from 6.71 to 11.28 mbgs. No odour or staining was identified in the native material.

#### 7.1.4 Bedrock

Bedrock was not encountered at the boreholes advanced at the Site to the maximum investigative depth of 11.28 mbgs.

### 7.2 Groundwater: Elevations and Flow Direction

The monitoring well network consisted of six (6) monitoring wells (BH1-23, BH2-23, BH5-23, BH3, BH4 and BH7) screened within the fill material and native soils. On October 2, 2024 (round 1), the measured depth of the groundwater table ranged from 0.41 (BH1-23) to 1.67 (BH2-23) mbgs; the calculated groundwater elevations ranged from 90.87 (BH2-23) to 92.24 (BH1-23) masl in the groundwater monitors. On December 2, 2024 (round 3), the measured depth of the groundwater table ranged from 0.7

(BH1-23/BH4) to 6.7 (BH3) mbgs; the calculated groundwater elevations ranged from 85.84 (BH3) to 91.95 (BH1-23) masl in the groundwater monitors. The groundwater levels and corresponding elevations are summarized in Table 3, and presented in the borehole logs provided in Appendix E.

Taking into consideration surface water features in the surrounding area (discussed in Section 3.1), the regional groundwater flow direction is inferred to be northwesterly. Localized flow conditions across the site indicate a groundwater flow to the north to northwest in the unconfined clayey silt to silty clay aquifer; groundwater contour plans are shown in Figure 6a and 6b.

Groundwater may be influenced by disturbed soil (fill), underground utilities and/or underground building structures in the area. Given the minimum depth to groundwater identified on-site of 0.41 mbgs, utility conduits may provide a preferential flow path for groundwater.

All measurements of groundwater and liquid petroleum (if any) depth were made with a Solinst Model 122 oil/water interface probe. Both the probe and the measuring tape that came into contact with liquids within the monitor are cleaned with Alconox detergent, and then rinsed with distilled water and methanol and allowed to air dry after each measurement.

### 7.2.1 Groundwater: Hydraulic Conductivity

The hydraulic conductivity for the native soil at the Site was estimated to be  $1.0 \times 10^{-7}$  m/s for the clayey silt to silty clay where the monitoring wells were screened.

### 7.2.2 Groundwater: Horizontal Hydraulic Gradients

The horizontal hydraulic gradient, between each monitoring well pair, is calculated using the following equation:

$$i = \Delta h / \Delta s$$

Where,

$i$  = horizontal hydraulic gradient;

$\Delta h$  (m) = groundwater elevation difference; and,

$\Delta s$  (m) = separation distance.

The calculated hydraulic gradient value for the monitoring wells was an average of 0.1 m/m to 0.01 m/m to the north to northwest.

Using a value of  $1.0 \times 10^{-7}$  m/s for the hydraulic conductivity of the, a calculated hydraulic gradient of 0.01m/m, and 20% for effective porosity of clayey silt to silty clay (McWhorter and Sunada, 1977), Darcy's Law calculations were made to determine the potential groundwater flow velocity at the Site. The groundwater flow velocity was calculated to be approximately 0.0016 metres per year in the water-bearing clayey silt to silty clay.

## 7.3 Soil Texture

According to O. Reg. 153/04, to be classified as medium to fine textured soil, at least 2/3 of the soil on Phase Two Property, measured by volume, must contain 50% or more by mass of particles that are less than 75 micrometres in mean diameter.

Based on the borehole logs, the native soils are defined as silty clay to clayey silt. EXP geotechnical staff completed a grain size analysis to confirm soil texture on samples BH3- SS6 and BH7-SS7. Results show that more than 50% by mass of the samples consist of particle sizes smaller than 75  $\mu$ m in diameter. BH3-SS6 indicated that approximately 87% of the sample was classified as medium to fine textured and BH7-SS7 indicated that approximately 93% of the sample was classified as medium to fine textured. As a result, soil is classified as medium to fine textured. EXP's grain size analysis is provided in Appendix I.

## 7.4 Soil Field Screening

The combustible vapour readings from each sample interval were measured for all advanced boreholes, as a screening tool for soil sample selection for PHC and VOC analysis. Vapour concentration readings collected during subsurface drilling were measured using the RKI Eagle 2 calibrated with isobutylene and hexane or equivalent. The vapour readings, in ppm, are provided on the borehole logs in Appendix E.

Soil samples submitted for chemical analysis were selected on the basis of visual inspection of the recovered cores, combustible vapour readings, sample location and/or depth interval. The hexane readings were detected up to a maximum of 620 ppm.

## 7.5 Soil Quality

In accordance with the scope of work, chemical analyses were performed on selected soil samples recovered from the boreholes. The selection of representative “worst case” soil samples was based on field screening, visual and/or olfactory evidence of impacts, and the presence of potential water bearing zones. Copies of the laboratory Certificates of Analysis for the analyzed soil samples are provided in Appendix G. A summary of the analytical results for the soil samples collected from the current investigation, including the locations and depths of each sample, a comparison of concentrations against applicable SCS, and the identification of the potential contaminants of concern, are provided in Tables 6 to 11. The maximum concentrations detected for each of the parameters analyzed during the current Phase Two investigation are provided in Table 5.

### 7.5.1 Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX)

Eleven (11) soil samples including one (1) QA/QC field duplicate (BH7-SS3-0) were submitted for PHCs and BTEX analysis.

The concentrations of all PHC and BTEX in the analyzed soil samples were either detected below the applicable Table 9 SCS or the laboratory RDLs with the following exception:

- Exceedances of PHC fraction F2 at BH4-SS3 (depth of 1.52 to 2.13 mbgs); A deeper sample, BH4-SS7 (depth of 6.09 to 6.70 mbgs), was submitted from this location and was within the Table 9 SCS for BTEX and PHCs;

The laboratory RDLs are below the Table 9 SCS. The results are presented in Table 6 and Figure 7.

### 7.5.2 Volatile Organic Compounds (VOCs)

Eleven (11) soil samples including one (1) QA/QC field duplicate (BH7-SS3-0) were submitted for VOCs analysis.

The concentrations of all VOC parameters in the analyzed soil samples were either below the Table 9 SCS or not detected above the laboratory RDLs.

The laboratory RDLs are below the Table 9 SCS. The results are presented in Table 7 and Figure 8.

### 7.5.3 Polycyclic Aromatic Hydrocarbons (PAHs)

Seven (7) soil samples including one (1) QA/QC field duplicate (BH7-SS2-0) were submitted for PAHs analysis.

The concentrations of all PAH parameters in the analyzed soil samples were either detected below the applicable Table 9 SCS or the laboratory RDLs.

The laboratory RDLs are below the Table 9 SCS. The results are presented in Table 8 and Figure 9.

#### 7.5.4 Metals (including Hydride-Forming Metals) and Other Regulated Parameters (B-HWS, Cr (VI), Hg, CN)

Seven (7) soil samples including one (1) QA/QC field duplicate (BH7-SS1) were submitted for metals (including hydride-forming metals) and seven (7) soil samples including one (1) QA/QC field duplicates (BH7-SS1) were submitted for hot water soluble boron, hexavalent chromium, mercury and cyanide.

The concentrations of all metal and ORPs (hot water soluble boron, hexavalent chromium, and mercury) parameters in the analyzed soil samples were either detected below the applicable Table 9 SCS or the laboratory RDLs.

The laboratory RDLs are below the Table 9 SCS. The results are presented in Table 9 and Figure 10.

#### 7.5.5 Electrical Conductivity and Sodium Adsorption Ratio

Eight (8) soil samples including one (1) QA/QC field duplicate (BH7-SS1) were submitted for EC and SAR.

- Exceedances were identified at BH5 above the Table 9 SCS, obtained from a depth of 0 to 0.61 mbgs. A deeper delineation sampled from this location, obtained from 6.09 to 6.70 mbgs, was within the Table 9 SCS.

Based on the reported analytical results, exceedances of EC were identified at the Site. It is the Qualified Person's (QP's) opinion that the elevated concentrations of EC are associated with de-icing and salting substances routinely applied on-site during the winter months for vehicular and pedestrian safety. Therefore, as per Section 49.1 (1) of O. Reg. 153/04, which references Section 2 of Ontario Regulation 339 of the Revised Regulations of Ontario, 1990 (Classes of Contaminants – Exceptions), it is in the QP<sub>ESA</sub>'s opinion that the elevated levels of EC are not exceedances of the applicable Table 9 SCS.

The laboratory RDLs are below the Table 9 SCS. The results are presented in Table 9 and Figure 11.

#### 7.5.6 Soil pH

Thirteen (13) surface soil samples and two (2) subsurface soil samples, including one (1) QA/QC field duplicates (BH7-SS1), were submitted for pH analysis.

A pH (surficial) outside of the range of 5-9 was identified in samples BH5-SS1 (depth of 0.0 to 0.61 mbgs) and BH1-SS1 (depth of 0.0 to 0.61 mbgs). However, three (3) additional soil samples (BH1A, BH1B, BH1C and BH5A, BH5B, BH5C) were obtained in the vicinity of these locations and from the same depth. When the logarithmic average was taken between the three (3) new samples and the original sample with elevated pH, the average was within 5-9. As such, the Site is not considered sensitive and the Table 9 SCS can be applied to the Site.

The results are presented in Table 9.

#### 7.5.7 Polychlorinated Biphenyls (PCBs)

Three (3) soil samples including one (1) QA/QC field duplicate (BH1-SS1-0) were submitted for PCB analysis.

The concentrations of all PCB parameters in the analyzed soil samples were either below the Table 9 SCS or not detected above the laboratory RDLs.

The laboratory RDLs are below the Table 9 SCS. The results are presented in Table 10 and Figure 12.

#### 7.5.8 Organochlorine Pesticides (OCPs)

Five (5) soil samples including one (1) QA/QC field duplicate (BH7-SS2-0) were submitted for OCP analysis.

The concentrations of all OCP parameters in the analyzed soil samples were either below the Table 9 SCS or not detected above the laboratory RDLs.

The laboratory RDLs are below the Table 9 SCS. The results are presented in Table 11 and Figure 13.

### 7.5.9 Chemical Transformation and Soil Contaminant Sources

The PHC Fraction F2 exceedance identified in soil at BH4 is likely associated with the historic UST formerly located on Site, located on the west side of the residential home and southeast of the garage. Previous reports also identified PHC impacts in this area (Paterson Group, 2023). Soil impacts were all located adjacent to the former UST. It is unlikely that these parameters would undergo chemical transformation with the exception of lowering concentrations via natural attenuation with time.

These PHC exceedances were removed during the soil remediation program conducted in April of 2025. The remediation plan is presented as Figure 5C and the confirmatory soil sampling locations and results are presented in Figure 7B and 7C. All soils remaining on the Site are considered to be within the Table 9 SCS. Given that contamination is no longer present at the Site, chemical transformations are not a consideration. Furthermore, the source of the previous PHC impacts, a UST, has been removed and decommissioned and as such the PHC soil contaminant source is no longer present.

### 7.5.10 Evidence of Non-Aqueous Phase Liquid

Inspection of the soil retrieved from the test holes did not indicate the presence of non-aqueous phase liquid (NAPL) or hydrocarbon sheen at the time of the Phase Two ESA.

## 7.6 Groundwater Quality

In accordance with the scope of work, chemical analyses were performed on groundwater samples recovered from six (6) monitoring wells (BH3, BH4, BH7, BH1-23, BH2-23, BH5-23).

During the first groundwater monitoring event in October 2024 (round 1), only one (1) newly installed well (BH4) was accessible for groundwater monitoring due to the other two (2) (BH3 and BH7) being dry at the time of the investigation. The four (4) accessible monitoring wells were sampled by EXP on October 2, 2024.

Supplemental groundwater sampling events were carried out on November 21 (round 2) and December 2, 2024 (round 3). Groundwater samples were obtained from previously inaccessible monitoring wells BH3 and BH7 on November 21, 2024, to assess APEC 5 (fill pipes at the north portion of the residential home on-Site), and horizontally delineate groundwater impacts, respectively. Supplemental groundwater samples were also obtained on November 21, 2024 from monitoring wells BH4, BH2-23 and BH5-23, to re-assess PAHs, BTEX, and metals.

On December 2, 2024, supplemental groundwater samples were obtained from BH3, BH4, BH7, BH2-23 and BH5-23 to further assess PAH, BTEX, and metals.

Copies of the laboratory Certificates of Analysis for the analyzed groundwater samples are provided in Appendix G. A summary of the analytical results for the groundwater samples collected are provided in Tables 12 to 15. The maximum concentrations detected across all sampling events for each of the parameters analyzed are provided in Table 5.

### 7.6.1 Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX)

A total of eleven (11) groundwater samples including three (3) QA/QC field duplicates (BH4-0, BH7-0, BH5-23-0) were submitted for PHCs and/or BTEX analysis.

During the sampling, the concentrations of all PHC parameters and BTEX in the analyzed groundwater samples were either detected below the applicable Table 9 SCS or the laboratory RDLs.

The results are presented in Table 12 and Figure 14.

### 7.6.2 Volatile Organic Compounds (VOCs)

A total of eight (8) groundwater samples including two (2) QA/QC field duplicates (BH7-0, BH5-23-0) were submitted for VOCs analysis.

During sampling, the concentrations of all VOC parameters in the analyzed groundwater samples were either detected below the applicable Table 9 SCS or the laboratory RDLs.

The results are presented in Table 13 and Figure 15.

### 7.6.3 Polycyclic Aromatic Hydrocarbons (PAHs)

A total of eleven (11) groundwater samples including three (3) QA/QC field duplicates (BH4-0, BH7-0, BH5-23-0) were submitted for PAHs analysis.

The concentrations of all PAH parameters in the analyzed groundwater samples were either below the Table 9 SCS or not detected above the laboratory RDLs.

The results are presented in Table 14 and Figure 16.

### 7.6.4 Metals (including Hydride-Forming Metals) and ORPs (including Cr(VI), CN- and Hg)

A total of fourteen (14) groundwater samples including three (3) QA/QC field duplicates (BH7-0, BH7-0, BH5-23-0) were submitted for metals and ORPs analysis.

The concentrations of all metal and ORPs in the analyzed groundwater samples were either detected below the applicable Table 9 SCS or the laboratory RDLs.

The results are presented in Table 15 and Figure 17.

### 7.6.5 Sodium (Na) and chloride (Cl)

A total of nine (9) groundwater samples including two (2) QA/QC field duplicates (BH5-23-0, BH7-0) were submitted for sodium and chloride analysis.

Sodium and chloride were not detected above the applicable Table 9 SCS in the analyzed samples.

The laboratory RDLs are below the Table 9 SCS. The results are presented in Table 15 and Figure 18.

### 7.6.6 Chemical Transformation and Groundwater Contaminant Sources

The results of the current investigation did not indicate the presence of free product at any of the monitoring wells.

Given that no groundwater exceedances of the Table 9 SCS were identified, chemical transformations and groundwater contaminant sources are not considerations.

### 7.6.7 Evidence of Non-Aqueous Phase Liquid (NAPL)

No evidence of NAPL was observed during groundwater monitoring, purging and sampling activities.

## 7.7 Sediment Quality

As no surface water body was located on-Site, the Phase Two ESA did not include sediment sampling.

## 7.8 Quality Assurance and Quality Control Results

Quality assurance and quality control measures were taken during the field activities to meet the objectives of the sampling and quality assurance plan to collect unbiased and representative samples to characterize existing conditions in the overburden and water table units at the Site.

Review of field activity documentation indicated that recommended sample volumes were collected from soil and groundwater for each analytical test group into appropriate containers and preserved with proper chemical reagents in accordance with the protocols set out in the "Protocol for Analytical Methods used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act" (MECP, 2004). Samples were preserved at the required temperatures in pre-chilled insulated coolers and met applicable holding time requirements, when relinquished to the receiving laboratory.

Field QA/QC samples were collected during soil and groundwater sampling. A total of four (4) soil and four (4) groundwater duplicate samples were collected to evaluate sampling precision. Two (2) trip blank samples were analyzed for VOCs.

Four (4) soil sample/field duplicate sample pair(s) were collected and analyzed for the following pCOCs:

- BH7-SS3/BH7-SS30 for PHCs/BTEX and VOCs;
- BH7-SS2/BH7-SS20 for PAHs and OCPs;
- BH7-SS1/BH7-SS10 for Metals and ORPs;
- BH1-SS1/BH1-SS1-0 for PCBs.

Four (4) groundwater sample/field duplicate sample pair were collected and analyzed for the following pCOCs:

- BH5-23/BH5-23-0 for PHCs/BTEX, VOCs, PAHs, Metals and ORPs;
- BH7/BH7-0 for PHCs/BTEX, VOCs, PAHs, Metals and ORPs;
- BH7/BH7-0 for Metal and ORPs;
- BH4/BH4-0 for PAHs and PHCs/BTEX.

The field duplicate sample results were quantitatively evaluated by calculating the relative percent difference (RPD).

For soil samples, the alert limit criteria for the field duplicate RPD is >10% for EC, >30% for PHCs, OCPs, PCBs, metals (including hydride forming metals) and ORPs (Hg and SAR), >35% for ORPs (Cr (VI) and CN-), >40% for PAHs, ORPs (B-HWS), and >50% for VOCs. The calculated RPD between the duplicate samples and the original samples for soil was below the applicable alert limit criteria for all of the parameters analyzed, with the following exceptions:

- The RPD was 33% for arsenic, 40% for copper, 33% for lead, 45% for molybdenum, 45% for zinc, and 15% for EC between sample BH7-SS1 and duplicate BH7-SS10.

Even though the calculated RPDs for metals and EC between sample BH7-SS1 and duplicate BH7-SS10 were above the alert limit criteria of 30% and 10%, respectively, this does not affect the conclusions of the Phase Two ESA as both concentrations of the samples and duplicates of the above-mentioned parameters were within the Table 9 SCS. The RPD exceedances in soil are attributed to the surficial nature of the sample (SS1) leading to soil heterogeneity; the sample was observed to contain mostly granular material and asphalt.

For groundwater samples, the alert limit criteria for the field duplicate RPD is >30% for PHCs/BTEX, VOCs, and PAHs, and >20% for metals (including hydride-forming metals) and ORPs (Hg, Cr (VI), CN-, Na and Cl). The calculated RPD between the duplicate samples and the original samples for groundwater was below the applicable alert limit criteria for all of the parameters analyzed with the following exceptions:

- The RPD was 56% for molybdenum and 49% for selenium between sample BH5-23 and duplicate BH5-23-0;
- The RPD was 27% for copper, 54% for nickel and 37% for vanadium between sample BH7 and duplicate BH7-0;
- The RPD was 49% for molybdenum and 67% for vanadium between sample BH7 and duplicate BH7-0.

Even though the calculated RPD for metals between samples BH5-23 and its duplicate BH5-23-0, BH7 and its duplicate BH7-0, and BH7 and its duplicate BH7-0, were above the alert limit criteria of 20% this does not affect the conclusions of the Phase Two ESA, as concentrations of above-mentioned parameters were within the O. Reg. 153/04 Table 9 SCS. Therefore, the conclusions are not affected, and objectives of the Phase Two ESA are considered to have been met.

The trip blanks were below the laboratory RDL for all VOCs analyzed.

Assessment of the duplicate soil and groundwater samples showed that the results generally met analytical test group specific acceptance criteria. The overall assessment indicates that the data is acceptable for meeting the objectives of the Phase Two ESA.

The subcontract laboratory used during this investigation, AGAT, is accredited by the Standards Council of Canada/Canadian Association of Environmental Analytical Laboratories in accordance with ISO/IEC 17025:1999 – “General Requirements for the Competence of Testing and Calibration Laboratories” for the analysis of all parameters for all samples in the scope of work for which SCS have been established under Ontario Regulation 153/04.

The analytical programs conducted by AGAT included analytical test group specific QA/QC measures to evaluate the accuracy and precision of the analytical results and the efficiency of analyte recovery during solute extraction procedures. The laboratory QA/QC program consisted of the preparation and analysis of laboratory duplicate samples to assess precision and sample homogeneity, method blanks to assess analytical bias, spiked blanks and QC standards to evaluate analyte recovery, matrix spikes to evaluate matrix interferences and surrogate compound recoveries (VOCs only) to evaluate extraction efficiency. The laboratory QA/QC results are presented in the Quality Assurance Report provided in the Certificate of Analysis prepared by AGAT. The QA/QC results are reported as percent recoveries for matrix spikes, spike blanks and QC standards, relative percent difference for laboratory duplicates and analyte concentrations for method blanks. The QA/QC results were assessed against test group control limits in the case of spiked blanks, matrix spikes and surrogate recoveries and alert criteria in the case of method blanks and laboratory duplicates. Review of the laboratory QA/QC results reported by AGAT indicated that they were within acceptable control limits or below applicable alert criteria for the sampled media and analytical test groups with the following exception:

- A molybdenum groundwater QA/QC lab exceedance was identified in the Lab CofA 24H204750. A method blank spike recovery was measured at 124% where the upper acceptable limit was 120%. Given that this indicates that our samples would be biased high for molybdenum and because our samples were all still within the MECP Table 9 Standards for molybdenum, for groundwater, this is not considered to affect the conclusions of the Phase Two ESA.

Based on the assessment of the QA/QC, the analytical results reported are of acceptable quality and data qualifications are not required.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## 7.9 Phase Two Conceptual Site Model

A Phase Two CSM provides a narrative, graphical and tabulated description integrating information related to the Site geologic and hydrogeologic conditions, areas of potential environmental concern/potential contaminating activities, the presence and distribution of potential contaminants of concern, contaminant fate and transport, and potential exposure pathways. The Phase Two CSM was completed in accordance with O. Reg.153/04 as defined by the MECP and is presented in Appendix H.

## 8 Conclusions

A Phase Two ESA was conducted to evaluate soil and groundwater quality within the APECs, identified during the Phase One ESA (EXP, October 7, 2024).

The results and findings of the Phase Two ESA conducted at the Site are summarized as follows:

- Between September 24 to 26, 2024 a total of eight (8) boreholes (BH1 to BH8) were advanced at the Site to a maximum depth of 11.28 mbgs by a licensed well contractor, Terra Firma Environmental Services Ltd. (Terra Firma), under the full-time supervision of EXP staff. Three (3) of the boreholes were instrumented with groundwater monitoring wells (BH3, BH4, and BH7), installed for environmental purposes. Please note that the drilling investigation was carried out as part of a combined geotechnical/environmental/hydrogeological investigation and that not all borehole locations were sampled for environmental purposes.
- The general stratigraphy at the Site was comprised of topsoil and/or granular fill, underlain by fill (silty clay to sandy silt fill), overlying native layers of silty clay, and sandy silt till (BH1). Fill material was encountered at all borehole locations, except for BH2 and BH3. Bedrock was not encountered at the borehole completion depths, to a maximum investigative depth of 11.28 mbgs.
- The monitoring well network advanced as part of this Phase Two ESA consisted of three (3) (BH3, BH4, and BH7) monitoring wells screened within the native soils. In addition, three (3) pre-existing wells (BH1-23, BH2-23, and BH5-23) installed during a previous investigation were used for groundwater monitoring.
- During the first groundwater monitoring event in October 2024 (round 1), only one (1) newly installed well (BH4) was accessible for groundwater monitoring due to the other two (2) (BH3 and BH7) being dry at the time of the investigation. The four (4) accessible monitoring wells were sampled by EXP on October 2, 2024. The measured depth of the groundwater table ranged from 0.41 (BH1-23) to 1.67 (BH2-23) mbgs during the October monitoring event; the calculated groundwater elevations ranged from 90.87 (BH2-23) to 92.24 (BH1-23) masl (metres above sea level).
- Supplemental groundwater sampling events were carried out on November 21 (round 2) and December 2, 2024 (round 3). Groundwater samples were obtained from previously inaccessible monitoring wells BH3 and BH7 on November 21, 2024, to assess APEC 5 (fill pipes at the north portion of the residential home on-Site), and horizontally delineate groundwater impacts, respectively. Supplemental groundwater samples were also obtained on November 21, 2024 from monitoring wells BH4, BH2-23 and BH5-23, to re-assess PAHs, BTEX, and metals. On December 2, 2024, supplemental groundwater samples were obtained from BH3, BH4, BH7, BH2-23 and BH5-23 to further assess identified PAH, BTEX, and metals. All six (6) groundwater monitors were checked by EXP on December 2, 2024. The measured depth of the groundwater table from round 2 and 3 ranged from 0.7 (BH1-23/BH4) to 6.7 (BH3) mbgs; the calculated groundwater elevations ranged from 85.84 (BH3) to 91.94 (BH1-23) masl in the groundwater monitors.
- Based on the available groundwater depth measurements and the available groundwater monitors, a groundwater contour map was generated for the Site. Regional groundwater flow direction is inferred to be northwest. Localized flow conditions across the site indicate a groundwater flow to the north to northwest in the unconfined clayey silt to silty clay aquifer.
- The shallow horizontal hydraulic gradient on-Site was an average of 0.1 m/m to 0.01 m/m to the north to northwest, depending on the time of year.
- For assessment purposes, EXP selected the MECP (2011) Table 9 SCS.

- Soil samples were submitted for the analysis of PHCs, BTEX, VOCs, PAHs, PCBs, OCPs, metals (including hydrides), and/or ORPs, (B-HWS, Cr (VI), Hg, CN, EC, SAR, pH). All soil parameters were either non-detect or detected below the applicable Table 9 SCS with the exception of EC and PHCs, as follows:
  - Exceedances of PHC fraction F2 at BH4-SS3 (depth of 1.52 to 2.13 mbgs). A deeper sample from this location, BH4-SS7 (depth of 6.09 to 6.70 mbgs), was found to be within the Table 9 SCS for PHCs. Furthermore, the PHC exceedances were remediated in April of 2025, as outlined in Appendix J and illustrated in Figures 5C, 7B, and 7C.
  - Exceedance of EC at BH5-SS1 (depth of 0.0 - 0.61 mbgs). A deeper sample from this location, BH5-SS7 (depth of 6.09 to 6.70 mbgs), was found to be within the Table 9 SCS for EC.
  - A pH (surficial) outside of the range of 5-9 was identified in samples BH5-SS1 (depth of 0.0 to 0.61 mbgs) and BH1-SS1 (depth of 0.0 to 0.61 mbgs). However, three (3) additional soil samples (BH1A, BH1B, BH1C and BH5A, BH5B, BH5C) were obtained in the vicinity of these locations and from the same depth. When the logarithmic average was taken between the three (3) new samples and the original sample with elevated pH, the average was within 5-9. As such, the Site is not considered sensitive and the Table 9 SCS can be applied to the Site.
- Based on the reported analytical results, an exceedance of EC was identified at the Site. It is the Qualified Person's (QP's) opinion that the elevated concentration of EC is associated with de-icing and salting substances routinely applied on-site during the winter months for vehicular and pedestrian safety. Therefore, as per Section 49.1 (1) of O. Reg. 153/04, which references Section 2 of Ontario Regulation 339 of the Revised Regulations of Ontario, 1990 (Classes of Contaminants – Exceptions), it is in the QP<sub>ESA</sub>'s opinion that the elevated levels of EC are not exceedances of the applicable Table 9 SCS.
- A total of three (3) rounds of groundwater monitoring were completed. Monitoring occurred on October 2, 2024, November 21, 2024, and December 2, 2024 (round 1, round 2, round 3, respectively).
- Groundwater samples were submitted during the first round of groundwater monitoring for the analysis of PHCs, BTEX, VOCs, PAHs, metals (including hydrides) and ORPs (Cr (VI), Hg, CN, Na, Cl) from newly installed and accessible monitoring well BH4, and pre-existing monitoring wells BH1-23, BH2-23, BH5-23. All groundwater parameters were either non-detect or detected below the applicable Table 9 SCS.
- Groundwater samples were submitted during the second round of groundwater monitoring for the analysis of PHCs, BTEX, VOCs, PAHs, metals (including hydrides) and ORPs (Cr (VI), Hg, CN, Na, Cl). Previously dry wells BH3 and BH7 were sampled during this event. Additionally, supplemental samples from BH4, BH2-23, and BH5-23 were obtained to assess PAHs, BTEX, and metals. All groundwater parameters were either non-detect or detected below the applicable Table 9 SCS.
- Groundwater samples were submitted during the third round of groundwater monitoring for the analysis of PAHs, BTEX, and metals from BH3, BH4, BH7, BH2-23, and BH5-23. All groundwater parameters were either non-detect or detected below the applicable Table 9 SCS.
- No evidence of free product (i.e. visible film or hydrocarbon sheen), or odour was observed during soil sampling, groundwater purging, or any of groundwater sampling events.

Soil in exceedance of the O. Reg. 153/04 Table 9 SCS for PHCs must be addressed prior to filing an RSC. These soils were remediated, as discussed in the remediation report provided in Appendix J.

Given the previously identified PHC soil exceedances have been remediated, an RSC can be filed for the Site.

## 9 General Limitations

The information presented in this report is based on a limited investigation designed to provide information to support an assessment of the current environmental conditions within the subject property. The conclusions and recommendations presented in this report reflect Site conditions existing at the time of the investigation.

More specific information with respect to the conditions between samples, or the lateral and vertical extent of materials may become apparent during excavation operations. The interpretation of the borehole information must, therefore, be validated during any such excavation operations. Consequently, during the future development of the property, conditions not observed during this investigation may become apparent. Should this occur, EXP Services Inc. should be contacted to assess the situation, and the need for additional testing and reporting. EXP has qualified personnel to provide assistance in regards to any future geotechnical and environmental issues related to this property.

The environmental investigation was carried out to address the intent of applicable provincial Regulations, Guidelines, Policies, Standards, Protocols and Objectives administered by the Ministry of the Environment. It should also be noted that current environmental Regulations, Guidelines, Policies, Standards, Protocols and Objectives are subject to change, and such changes, when put into effect, could alter the conclusions and recommendations noted throughout this report. Achieving the study objectives stated in this report has required us to arrive at conclusions based upon the best information presently known to us. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing information obtained and in the formulation of the conclusions. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions.

Our undertaking at EXP, therefore, is to perform our work within limits prescribed by our clients, with the usual thoroughness and competence of the engineering profession. It is intended that the outcome of this investigation assist in reducing the client's risk associated with environmental impairment. Our work should not be considered 'risk mitigation'. No other warranty or representation, either expressed or implied, is included or intended in this report.

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*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## 10 Closure

We trust this report is satisfactory for your purposes. Should you have any questions, please do not hesitate to contact this office.

Yours truly,

EXP Services Inc.



Jaimesyn Patterson, B.Sc.H.,  
Environmental Scientist  
Environmental Services

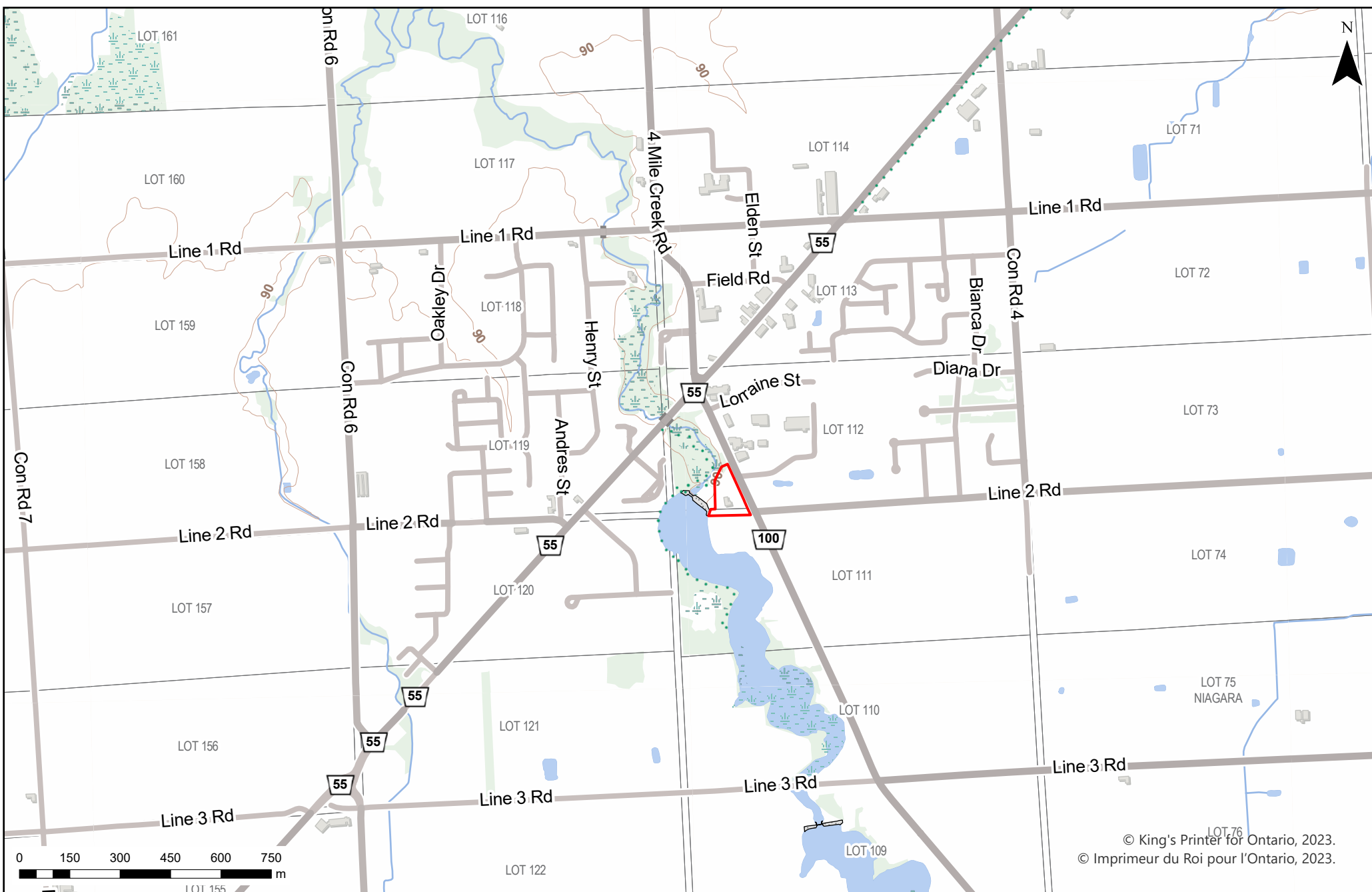


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## 11 References

- EXP Service Inc., Phase One Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, dated October 7, 2024.
- EXP Service Inc., Phase Two Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, dated November 7, 2024.
- Paterson Group, Phase I-II Environmental Site Assessment, 1544 and 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, dated November 17, 2023.
- Englobe Corp., Phase I Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, dated September 30, 2021.
- Atlas of Canada Topographic Map (also known as Toporama) found on the Natural Resources Canada website at <http://atlas.nrcan.gc.ca/site/english/maps/topo/map>
- Brennand, T.A., Moore, A., Logan, C., Kenny, F., Russell, H.A.J., Sharpe, D.R. and Barnett, P.J., *Bedrock Topography of the Greater Toronto & Oak Ridges Moraine Areas, southern Ontario*; Geological Survey of Canada, Geological Survey of Canada Open File 3419, scale 1:200,000; 1998.
- Chapman, L.J. and D.F. Putnam, *The Physiography of Southern Ontario*, Third Edition, Ontario Ministry of Natural Resources, 1984.
- Freeze, R.A. and J.A. Cherry, *Groundwater*, Prentice-Hall of Canada Ltd., 1979.
- Google Earth, Version 6.1.0.5001 (<http://www.google.com/earth/index.html>).
- Oak Ridges Moraine Groundwater Program Public Mapping Portal (<https://maps.oakridgeswater.ca/Html5Viewer/index.html?viewer=ORMGPP>).
- McWhorter, D.B. and D.K. Sunada, *Groundwater Hydrology and Hydraulics*, Water Resources Publications, 1977.
- Ontario Geological Survey, *Bedrock Geology of Ontario, Southern Sheet, Ontario Geological Survey Map 2544*, Scale 1:1,000,000, 1991.
- Ontario Ministry of the Environment, Conservation and Parks, Access Environment website (<http://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action?search=basic&lang=en>).
- Ontario Ministry of the Environment, Conservation and Parks, Brownfields Registry website (<http://www.ontario.ca/environment-and-energy/brownfields-redevelopment>).
- Ontario Ministry of the Environment, Conservation and Parks, Species at Risk in Ontario website (<https://www.ontario.ca/page/species-risk-ontario>).
- Ontario Ministry of Natural Resources and Forestry, Heritage Areas Map
- Ontario Regulation 153/04 made under Part XV.1 of the *Environmental Protection Act*, July 1, 2011.
- Resource Productivity & Recovery Authority, Hazardous Waste Program Registered Generators website (<https://hazardouswaste-registrations.rpra.ca/s/>)
- Sharpe, D.R., *Quaternary Geology of Toronto and Surrounding Area, Ontario Geological Survey Preliminary Map P. 2204*, Geological Series, scale 1:100,000, 1980.

## Figures



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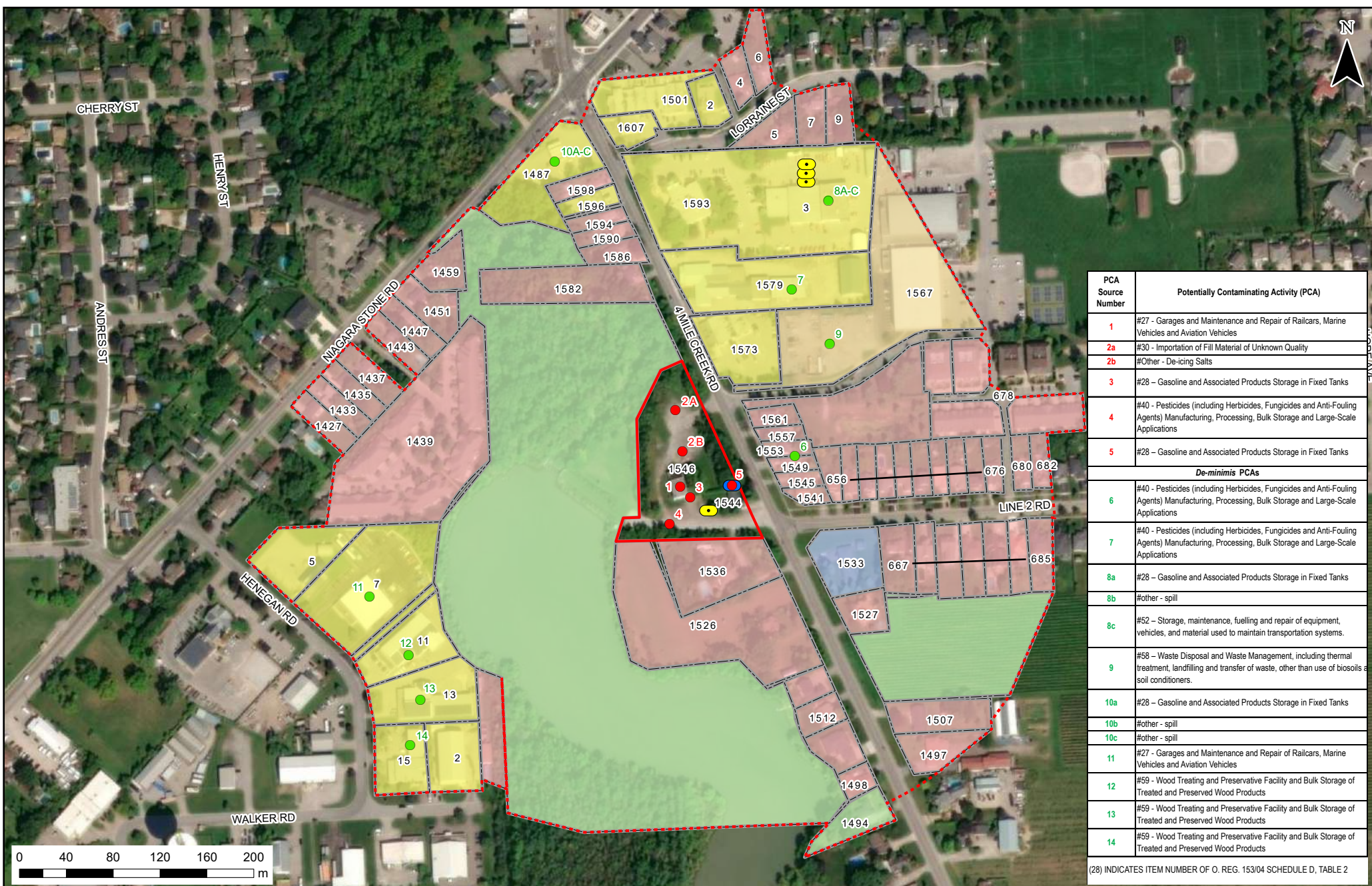
• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •  
 • INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

**LEGEND:**  
 APPROXIMATE SITE BOUNDARY

**TITLE AND LOCATION:**  
 SITE LOCATION PLAN  
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	MS
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	1

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PCA Source Number	Potentially Contaminating Activity (PCA)
1	#27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles
2a	#30 - Importation of Fill Material of Unknown Quality
2b	#Other - De-icing Salts
3	#28 - Gasoline and Associated Products Storage in Fixed Tanks
4	#40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications
5	#28 - Gasoline and Associated Products Storage in Fixed Tanks
<b>De-minimis PCAs</b>	
6	#40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications
7	#40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications
8a	#28 - Gasoline and Associated Products Storage in Fixed Tanks
8b	#other - spill
8c	#52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.
9	#58 - Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosolids or soil conditioners.
10a	#28 - Gasoline and Associated Products Storage in Fixed Tanks
10b	#other - spill
10c	#other - spill
11	#27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles
12	#59 - Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products
13	#59 - Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products
14	#59 - Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products

(28) INDICATES ITEM NUMBER OF O. REG. 153/04 SCHEDULE D, TABLE 2

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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- PHASE ONE STUDY AREA
- PCA CONTRIBUTING TO AN APEC
- PCA NOT CONTRIBUTING TO AN APEC
- FORMER UNDERGROUND STORAGE TANK
- UNDERGROUND STORAGE TANK

**LAND USE**

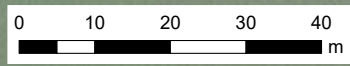
- COMMERCIAL
- RESIDENTIAL
- AGRICULTURAL
- INSITUATIONAL
- COMMUNITY

**TITLE AND LOCATION:**

PHASE ONE STUDY AREA, LAND USE PLAN AND POTENTIALLY CONTAMINATING ACTIVITIES (PCAS)

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	GTR-24000672-C0	DWN:	MS
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	2



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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- HYDRO-ELECTRIC UTILITY LINE
- NATURAL GAS UTILITY LINE
- STORM SEWER UTILITY LINE
- WATER UTILITY LINE
- FORMER UNDERGROUND STORAGE TANK
- UNDERGROUND STORAGE TANK

**TITLE AND LOCATION:**

**SITE PLAN**

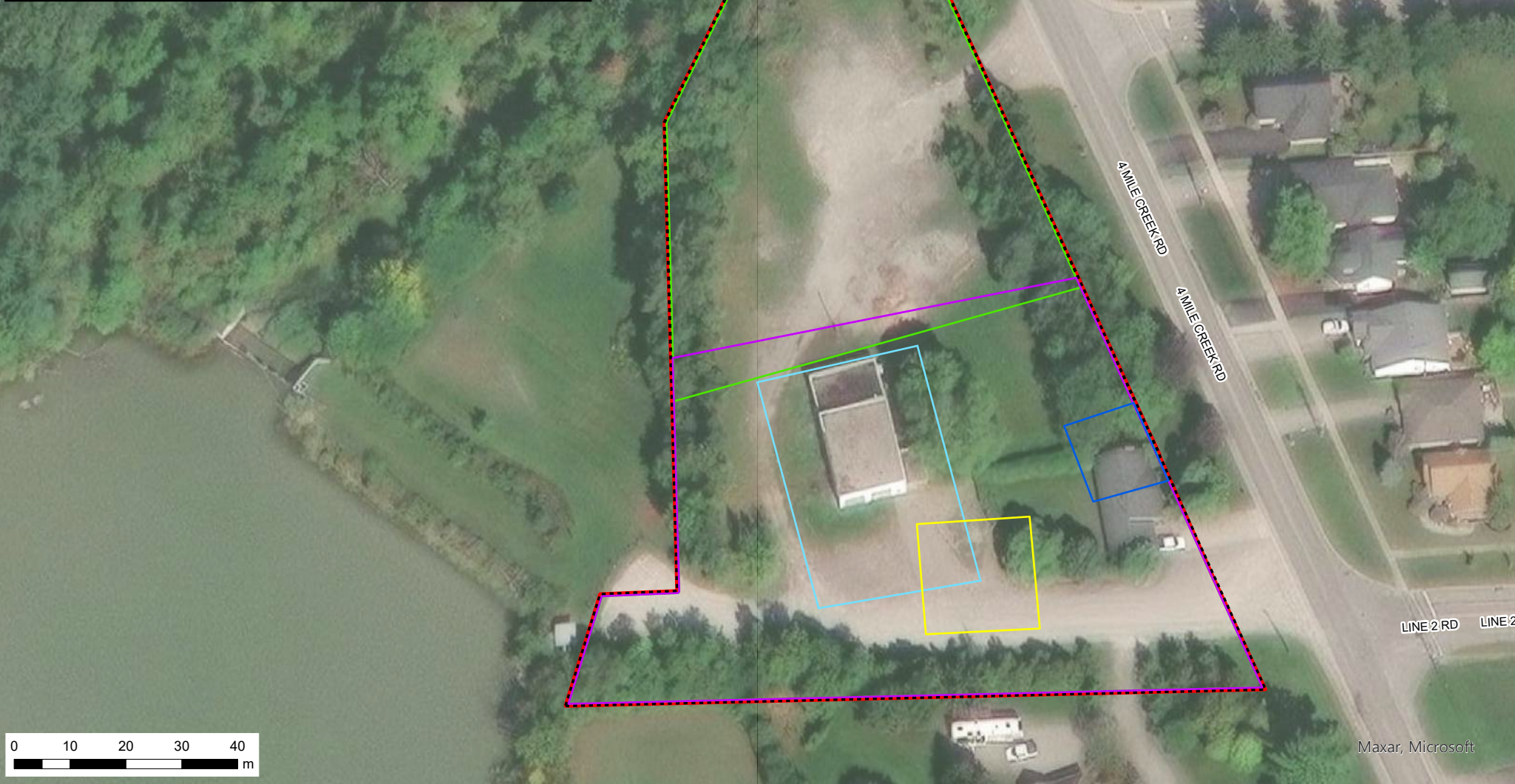
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

<small>PROJECT NO.:</small> GTR-24000672-C0	<small>DWN:</small> MS
<small>SCALE:</small> AS NOTED	<small>CHKD:</small> AC
<small>DATE:</small> MAY 2025	<small>FIG. NO.:</small> 3

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APEC	PCA Source Number	PCA
1	1	#27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles
2A	2a	#30 - Importation of Fill Material of Unknown Quality
2B	2b	#Other - De-icing Salts
3	3	#28 - Gasoline and Associated Products Storage in Fixed Tanks
4	4	#40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications
5	5	#28 - Gasoline and Associated Products Storage in Fixed Tanks



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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- APEC 1
- APEC 4
- APEC 3
- APEC 5
- APEC 2A
- APEC 2B

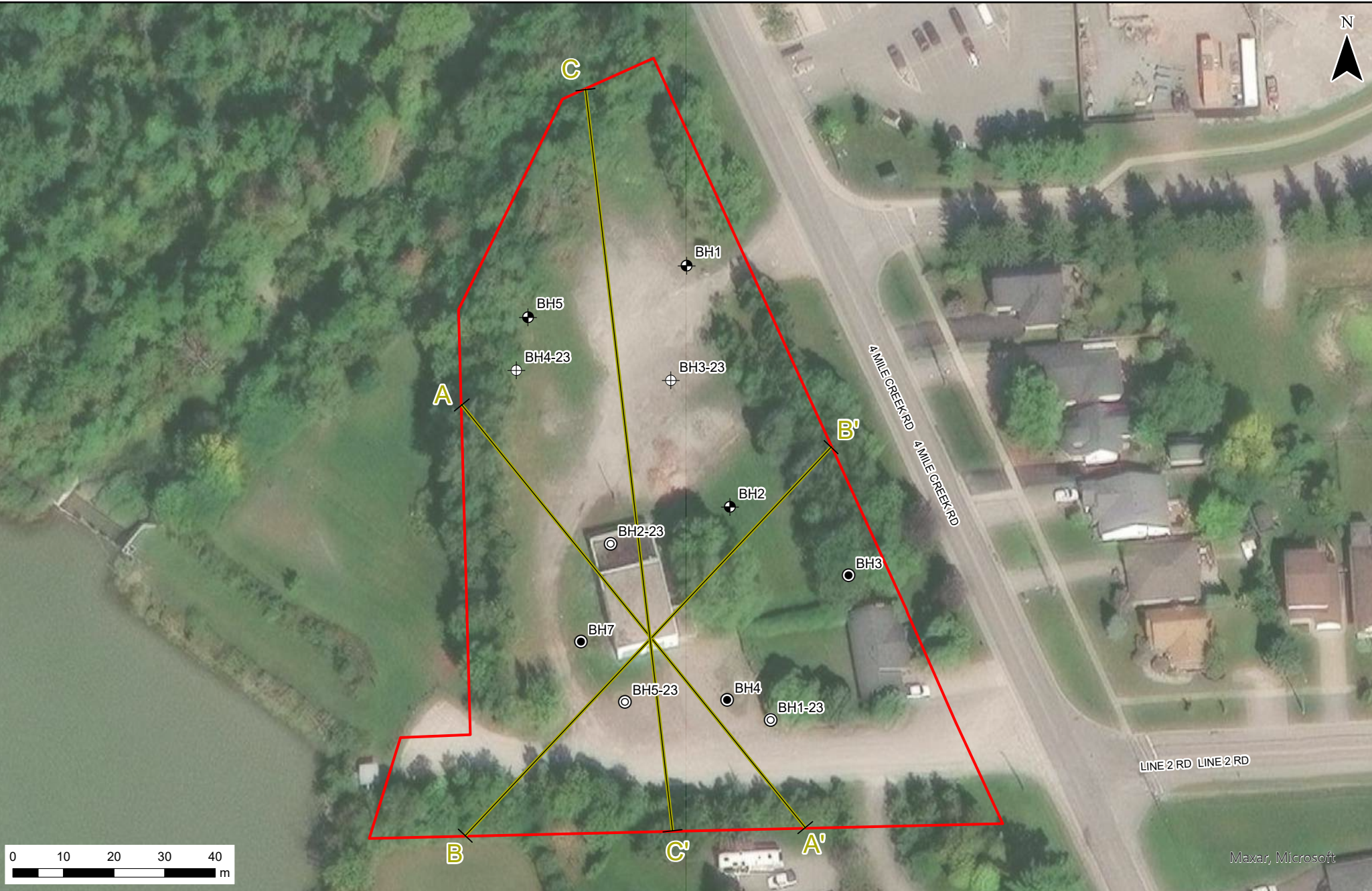
**TITLE AND LOCATION:**

**AREAS OF POTENTIAL ENVIRONMENTAL CONCERNS (APECs)**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	MS
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	4

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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- CROSS SECTION AXIS
- BOREHOLE (EXP, 2024)
- BOREHOLE / MONITORING WELL (EXP, 2024)
- BOREHOLE (PATERSON, 2023)
- BOREHOLE / MONITORING WELL (PATERSON, 2023)

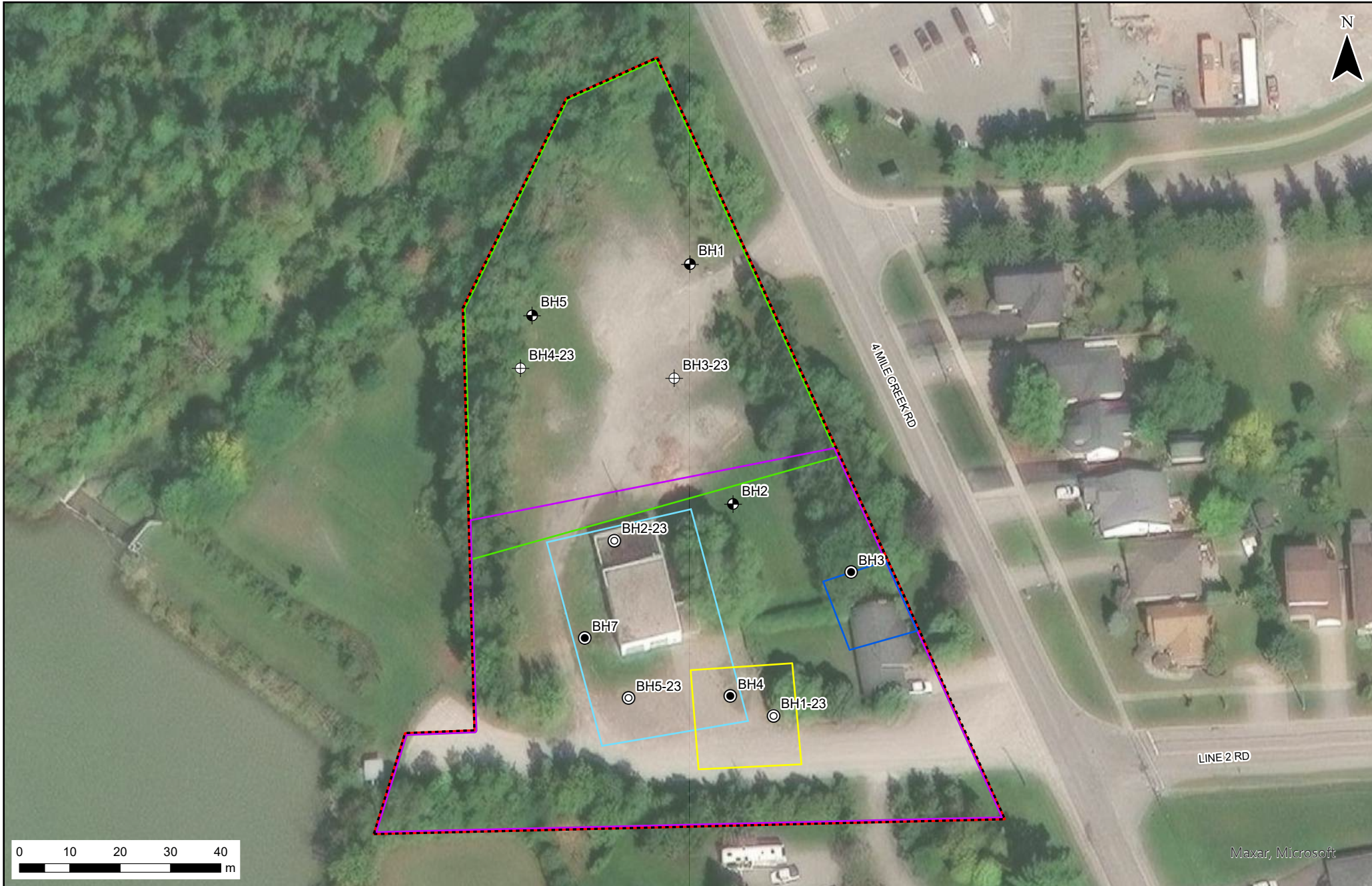
**TITLE AND LOCATION:**

**BOREHOLE / MONITORING WELL  
LOCATION PLAN**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
1544 AND 1546 FOUR MILE CREEK ROAD  
NIAGARA-ON-THE-LAKE, ONTARIO

<small>PROJECT NO.:</small> GTR-24000672-C0	<small>DWN:</small> MS
<small>SCALE:</small> AS NOTED	<small>CHKD:</small> AC
<small>DATE:</small> MAY 2025	<small>FIG. NO.:</small> 5A

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**LEGEND:**

	APPROXIMATE SITE BOUNDARY		APEC 1
	BOREHOLE (EXP, 2024)		APEC 2A
	BOREHOLE / MONITORING WELL (EXP, 2024)		APEC 2B
	BOREHOLE (PATERSON, 2023)		APEC 3
	BOREHOLE / MONITORING WELL (PATERSON, 2023)		APEC 4
			APEC 5

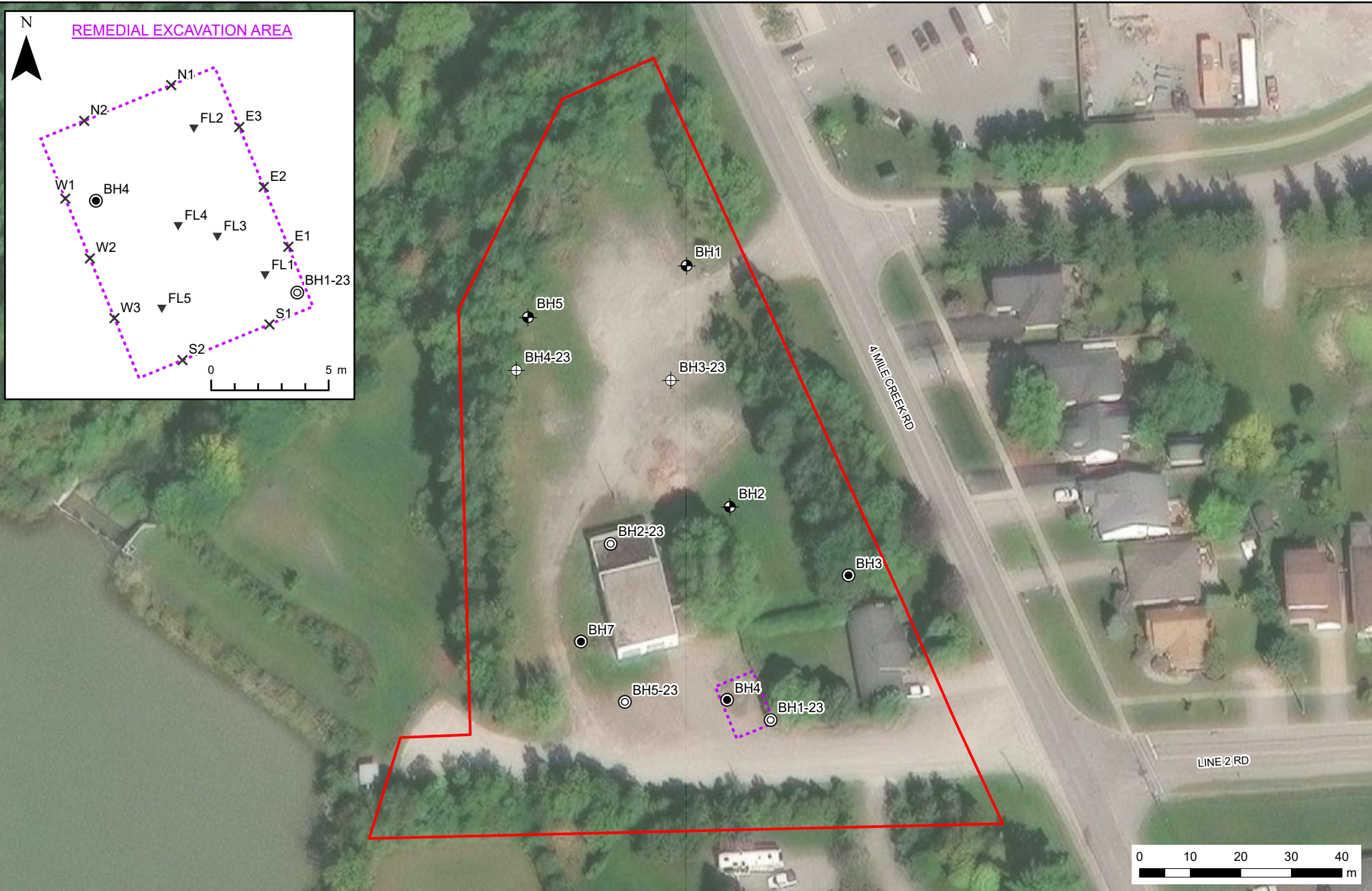
**TITLE AND LOCATION:**

**BOREHOLE / MONITORING WELL  
 LOCATION PLAN AND APECs**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	MS
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	5B

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**LEGEND:**

	APPROXIMATE SITE BOUNDARY		BOREHOLE (EXP, 2024)
	REMEDIAL EXCAVATION AREA		BOREHOLE / MONITORING WELL (EXP, 2024)
	CONFIRMATORY FLOOR SAMPLE		BOREHOLE (PATERSON, 2023)
	CONFIRMATORY WALL SAMPLE		BOREHOLE / MONITORING WELL (PATERSON, 2023)

**TITLE AND LOCATION:**

REMEDIAL EXCAVATION AREA AND  
 CONFIRMATORY SAMPLING LOCATION PLAN

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	5C

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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- BOREHOLE (EXP, 2024)
- BOREHOLE / MONITORING WELL (EXP, 2024)
- BOREHOLE (PATERSON, 2023)
- BOREHOLE / MONITORING WELL (PATERSON, 2023)
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- xx.xx GROUNDWATER ELEVATION (m ASL) AS MEASURED ON OCTOBER 02, 2024

**TITLE AND LOCATION:**

**GROUNDWATER CONTOUR PLAN  
(OCTOBER 2024)**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

<small>PROJECT NO.:</small> GTR-24000672-C0	<small>DWN:</small> MS
<small>SCALE:</small> AS NOTED	<small>CHKD:</small> AC
<small>DATE:</small> MAY 2025	<small>FIG. NO.:</small> 6

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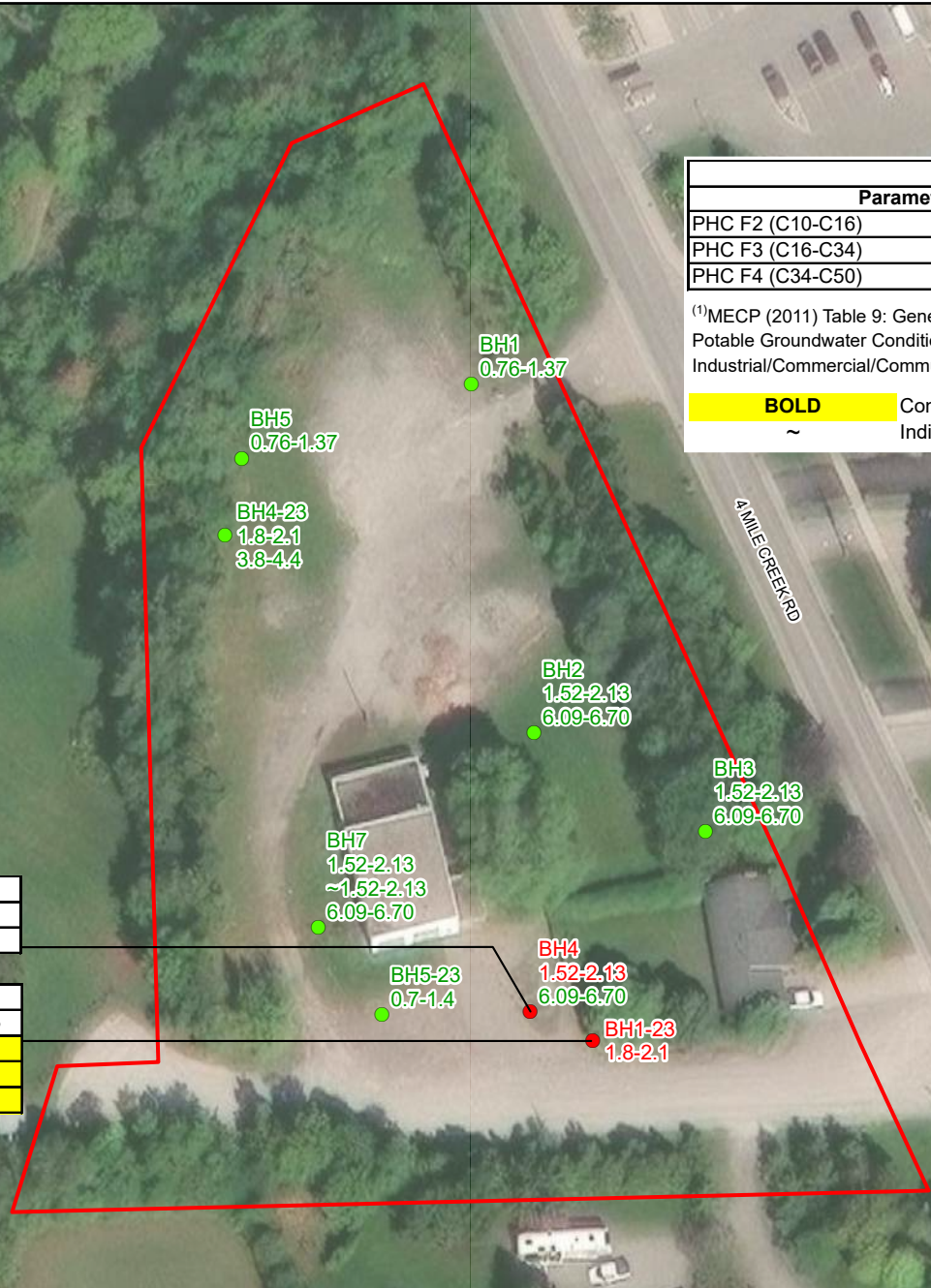


Legend	
Sample ID	Sample Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (µg/g)

2011 MECP Table 9 SCS <sup>(1)</sup>		
Parameter	Units	Conc.
PHC F2 (C10-C16)	µg/g	10
PHC F3 (C16-C34)	µg/g	240
PHC F4 (C34-C50)	µg/g	120

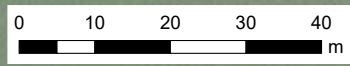
<sup>(1)</sup>MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition, for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use, and medium to fine textured soils

**BOLD** Concentration Exceeds MECP Table 9 SCS  
 ~ Indicates Field Duplicate Sample



BH4	1.52 to 2.13	6.09 - 6.70
	24-Sep-24	24-Sep-24
PHC F2 (C10-C16)	<b>229</b>	<10

BH1-23	1.8 - 2.1
	25-Sep-23
PHC F2 (C10-C16)	<b>137</b>
PHC F3 (C16-C34)	<b>1150</b>
PHC F4 (C34-C50)	<b>1340</b>



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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- SOIL SAMPLE EXCEEDS TABLE 9 SCS FOR PHCs
- SOIL SAMPLE MEETS TABLE 9 SCS FOR PHCs

**TITLE AND LOCATION:**

**SOIL ANALYTICAL RESULTS -  
 PETROLEUM HYDROCARBONS (PHCs)**

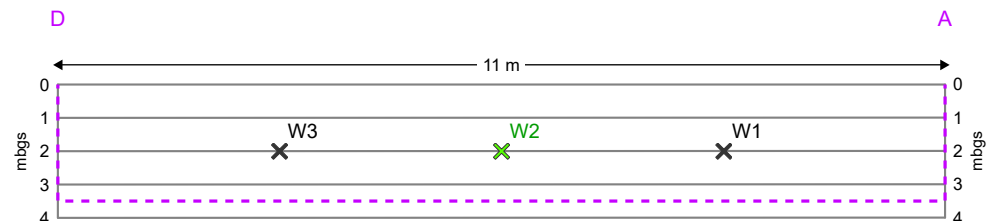
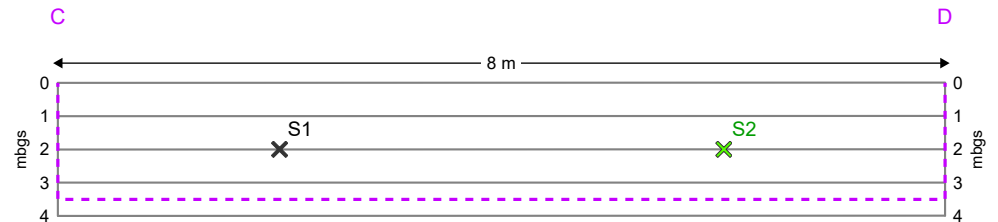
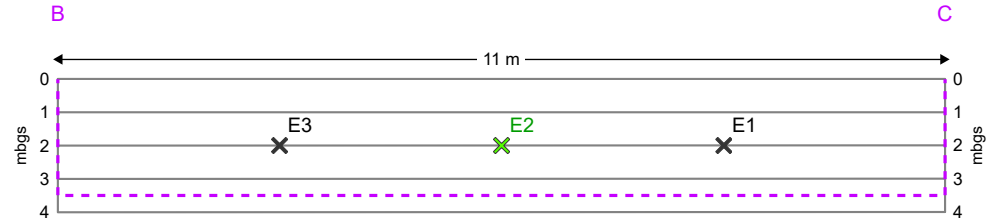
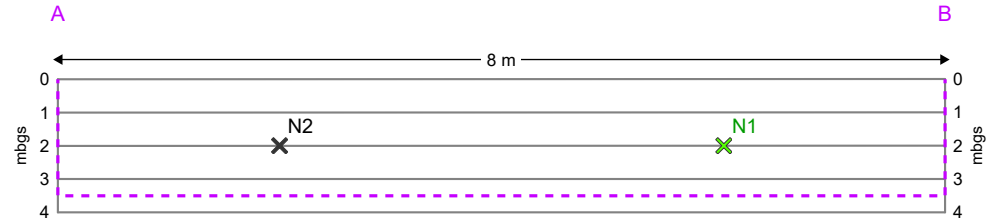
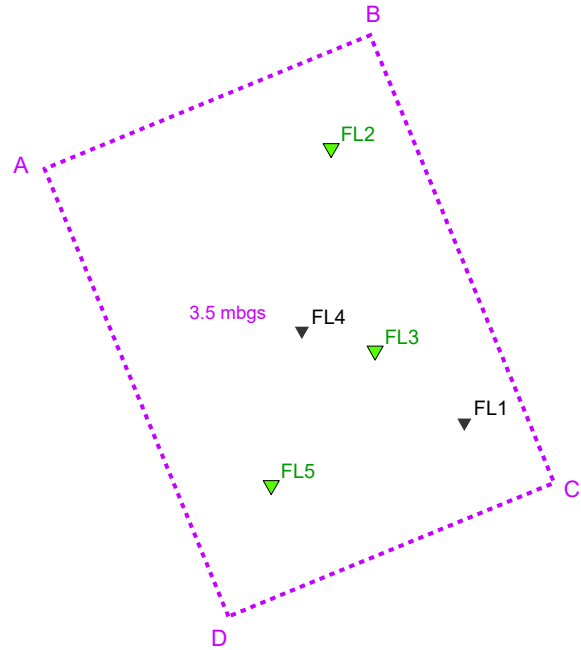
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	7

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REMEDIAL EXCAVATION WALLS

REMEDIAL EXCAVATION BASE



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LEGEND:

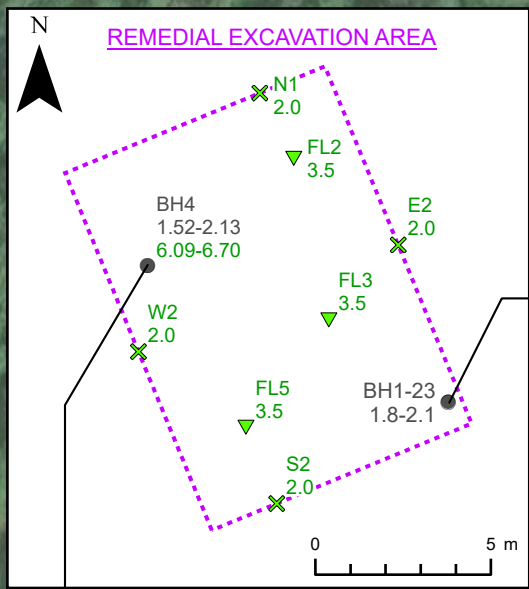
- APPROXIMATE SITE BOUNDARY
- ▼ CONFIRMATORY FLOOR SAMPLE
- X CONFIRMATORY WALL SAMPLE
- ▼ CONFIRMATORY FLOOR SAMPLE MEETS TABLE 9 SCS
- X CONFIRMATORY WALL SAMPLE MEETS TABLE 9 SCS

TITLE AND LOCATION:

REMEDIAL EXCAVATION-  
 PETROLEUM HYDROCARBONS (PHCs)  
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO: GTR-24000672-C0	DWN: JA
SCALE: AS NOTED	CHKD: AC
DATE: MAY 2025	FIG. NO.: 7B

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<b>BH1-23</b>	1.8 - 2.1
	25-Sep-23
PHC F2 (C10-C16)	<b>137</b>
PHC F3 (C16-C34)	<b>1150</b>
PHC F4 (C34-C50)	<b>1340</b>

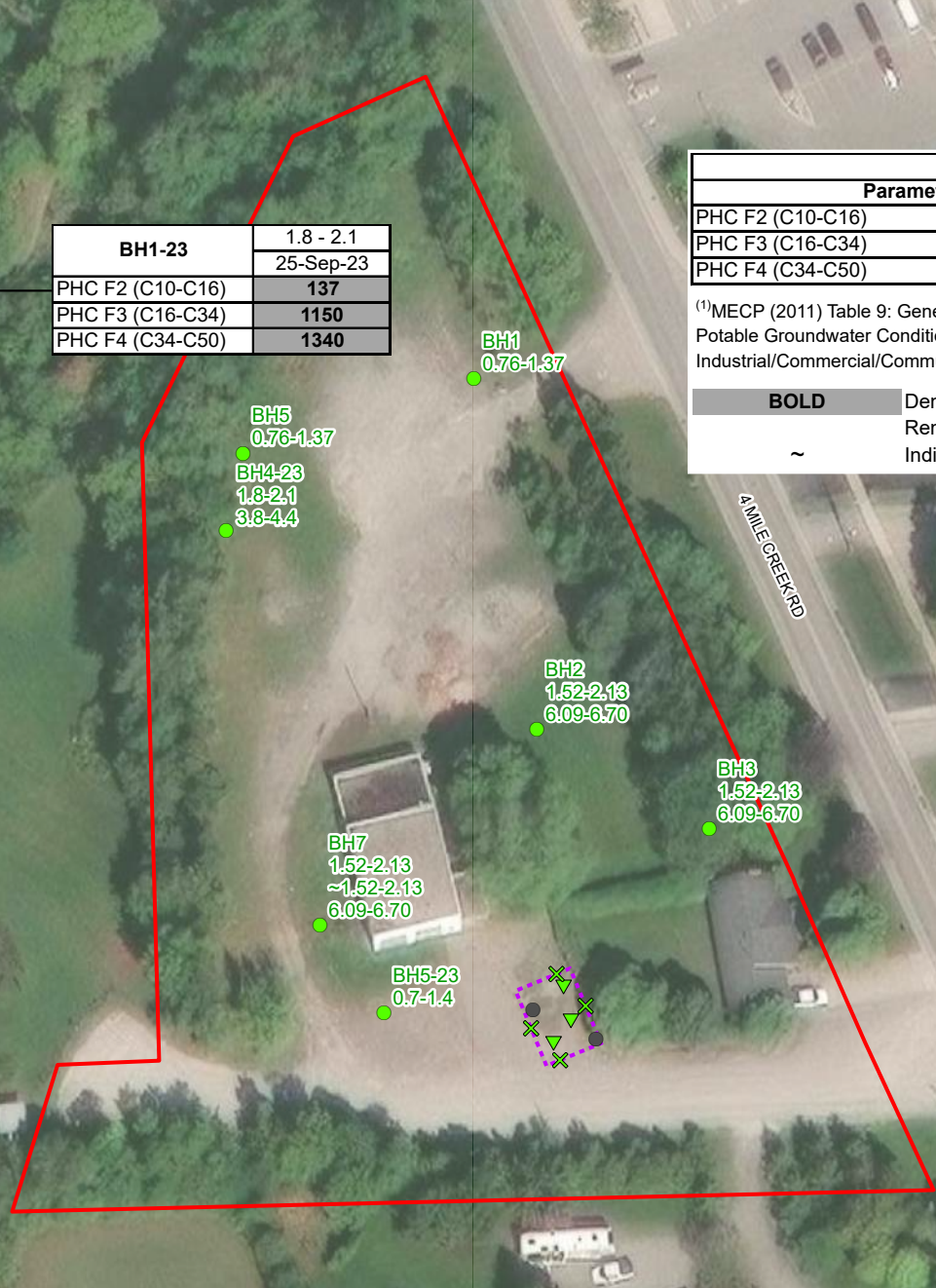
<b>BH4</b>	1.52 to 2.13	6.09 - 6.70
	24-Sep-24	24-Sep-24
PHC F2 (C10-C16)	<b>229</b>	<10

Legend		
Sample ID	Sample Depth (m bgs)	
	Date (dd-mm-yy)	
Parameter	Concentration (µg/g)	

2011 MECP Table 9 SCS <sup>(1)</sup>		
Parameter	Units	Conc.
PHC F2 (C10-C16)	µg/g	10
PHC F3 (C16-C34)	µg/g	240
PHC F4 (C34-C50)	µg/g	120

<sup>(1)</sup>MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition, for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use, and medium to fine textured soils

<b>BOLD</b>	Denotes Sample Representing Soils Removed During Remedial Excavation or Considered Remediated
~	Indicates Field Duplicate Sample



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**LEGEND:**

- ▭ APPROXIMATE SITE BOUNDARY
- ⋯ REMEDIAL EXCAVATION AREA
- SOIL SAMPLE EXCEEDS TABLE 9 SCS FOR PHCs (REMEDIATED)
- SOIL SAMPLE MEETS TABLE 9 SCS FOR PHCs
- ▼ CONFIRMATORY FLOOR SAMPLE MEETS TABLE 9 SCS FOR PHCs
- ✕ CONFIRMATORY WALL SAMPLE MEETS TABLE 9 SCS FOR PHCs

**TITLE AND LOCATION:**

**POST REMEDIATION  
 SOIL ANALYTICAL RESULTS -  
 PETROLEUM HYDROCARBONS (PHCs)**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	7C

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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- SOIL SAMPLE MEETS TABLE 9 SCS FOR BTEX

~ INDICATES A FIELD DUPLICATE SAMPLE

**TITLE AND LOCATION:**

**SOIL ANALYTICAL RESULTS -  
 BENZENE, TOLUENE, ETHYLBENZENE  
 AND XYLENES (BTEX)**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

<small>PROJECT NO.:</small> GTR-24000672-CO	<small>DWN.:</small> JA
<small>SCALE:</small> AS NOTED	<small>CHKD.:</small> AC
<small>DATE:</small> MAY 2025	<small>FIG. NO.:</small> 8

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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- SOIL SAMPLE MEETS TABLE 9 SCS FOR VOCs

~ INDICATES A FIELD DUPLICATE SAMPLE

**TITLE AND LOCATION:**

**SOIL ANALYTICAL RESULTS -  
 VOLATILE ORGANIC COMPOUNDS (VOCs)**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

<small>PROJECT NO.:</small> GTR-24000672-CO	<small>DWN.:</small> JA
<small>SCALE:</small> AS NOTED	<small>CHKD.:</small> AC
<small>DATE:</small> MAY 2025	<small>FIG. NO.:</small> 9

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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- SOIL SAMPLE MEETS TABLE 9 SCS FOR PAHs

~ INDICATES A FIELD DUPLICATE SAMPLE

**TITLE AND LOCATION:**

**SOIL ANALYTICAL RESULTS -  
 POLYCYCLIC AROMATIC  
 HYDROCARBONS (PAHs)**

**PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO**

<small>PROJECT NO.:</small> GTR-24000672-C0	<small>DWN.:</small> JA
<small>SCALE:</small> AS NOTED	<small>CHKD.:</small> AC
<small>DATE:</small> MAY 2025	<small>FIG. NO.:</small> 10

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Legend	
Sample ID	Sample Depth (m bgs)
	Date (dd-mm-yy)
Parameter	pH units

BH1	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	6.09 - 6.70
	25-Sep-24	28-Apr-25	28-Apr-25	28-Apr-25	Calculated Average	25-Sep-24
pH	<b>9.18</b>	7.05	6.7	6.93	6.99	7.03

Allowable Range*		
Parameter	Units	Value
pH - Surface Soils (< 1.5 m)	pH units	5 - 9
pH - Subsurface Soils (> 1.5 m)	pH units	5 - 11

\* O. Reg. 153/04 allowable range of soil pH for application of the generic Table 9 SCS

**BOLD** pH value considered to meet Table 9 SCS (resampled and averaged)

~ Indicates Field Duplicate Sample

BH5	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	6.09 - 6.70
	25-Sep-24	28-Apr-25	28-Apr-25	28-Apr-25	Calculated Average	25-Sep-24
pH	<b>11.4</b>	6.93	7.01	9.15	7.27	6.95



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**LEGEND:**

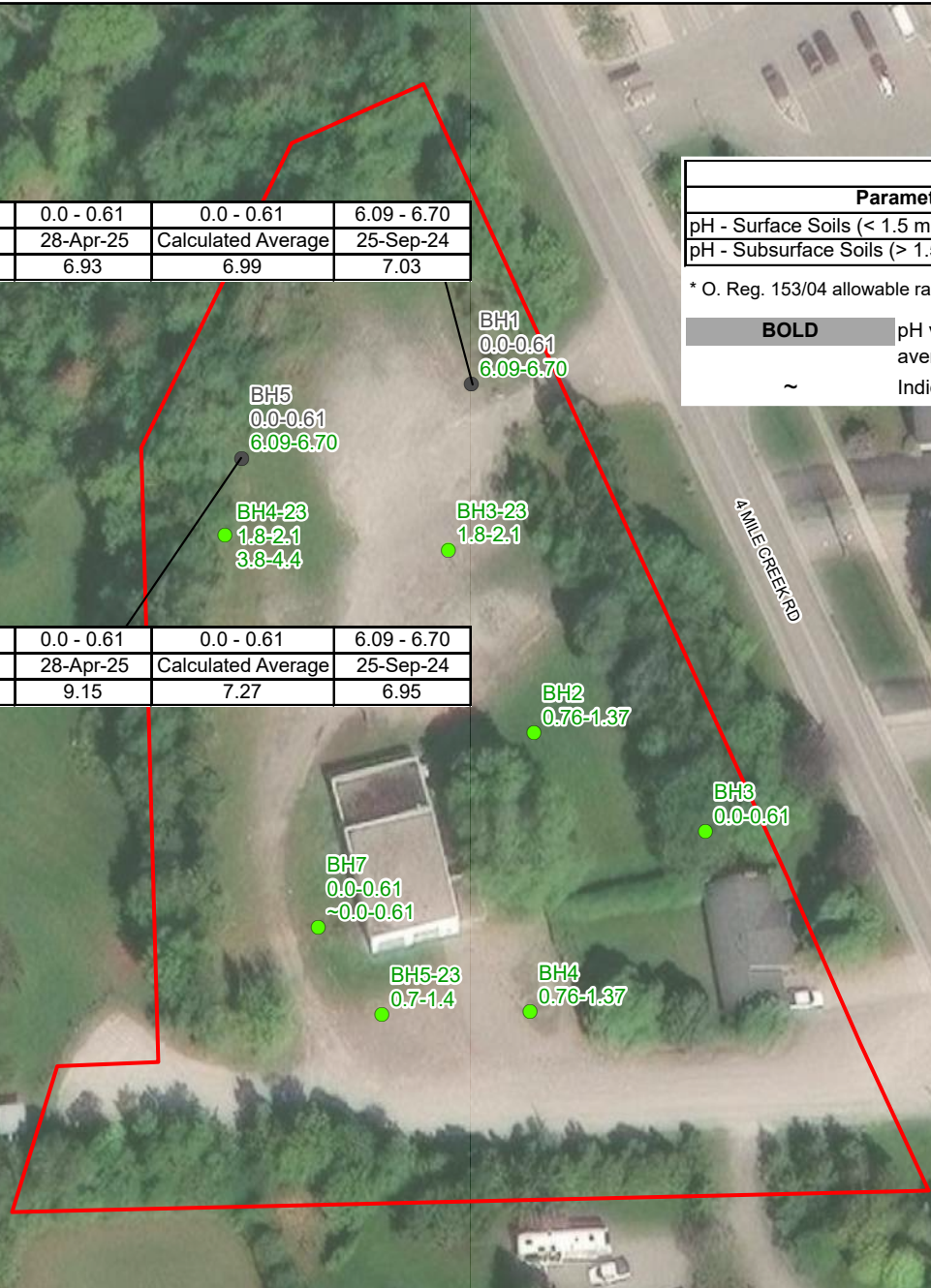
- APPROXIMATE SITE BOUNDARY
- SOIL SAMPLE MEETS TABLE 9 SCS FOR METALS
- SOIL SAMPLE IS CONSIDERED TO MEET TABLE 9 SCS (RESAMPLED AND AVERAGED)

**TITLE AND LOCATION:**

SOIL ANALYTICAL RESULTS - METALS, HYDRIDE-FORMING METALS, AND B-HWS, Cr (VI), Hg, CN-, pH

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-CO	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	11



Maxar, Microsoft



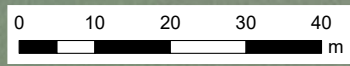
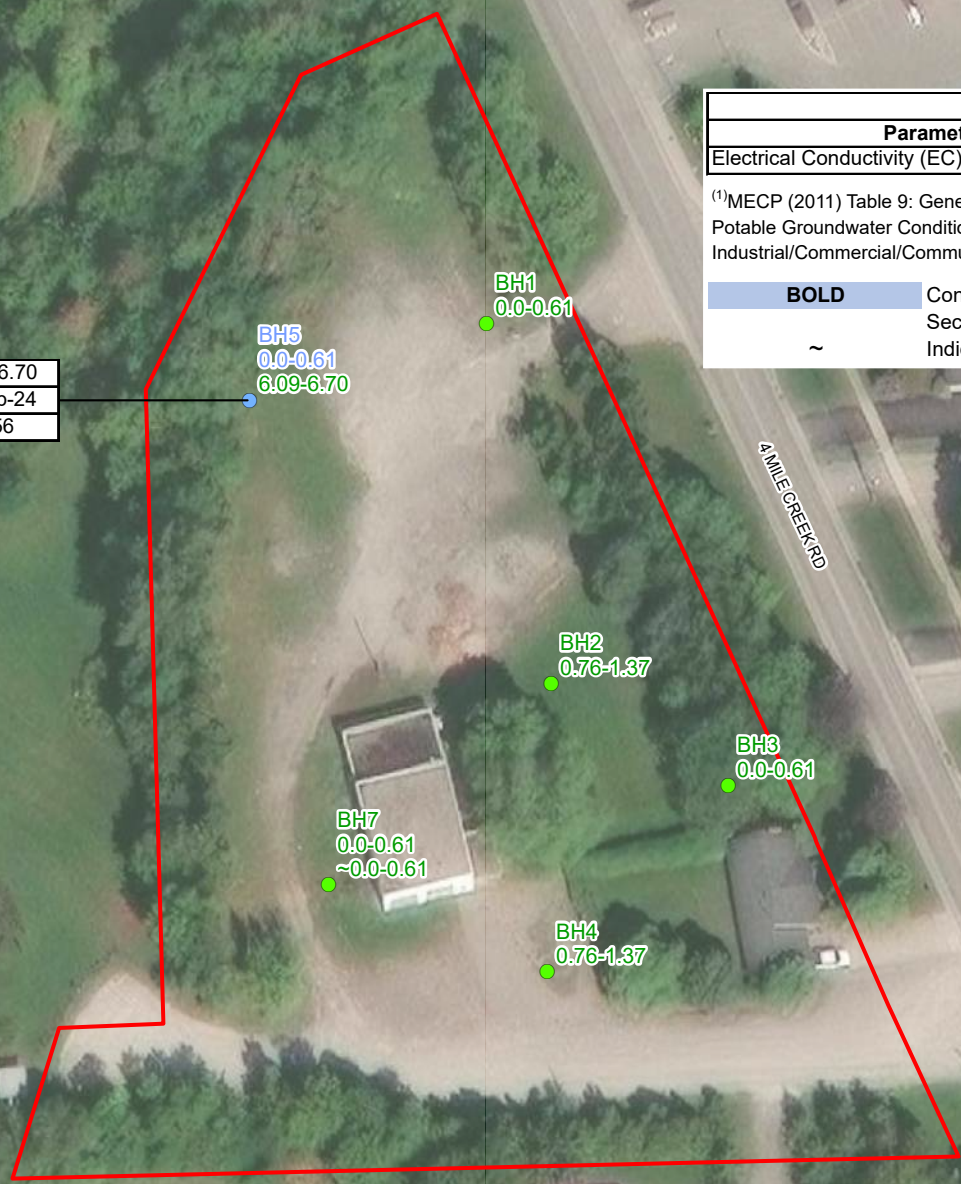
Legend	
Sample ID	Sample Depth (m bgs)
	Date (dd-mm-yy)
Parameter	mS/cm

2011 MECP Table 9 SCS <sup>(1)</sup>		
Parameter	Units	Conc.
Electrical Conductivity (EC)	mS/cm	0.7

<sup>(1)</sup>MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition, for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use, and medium to fine textured soils

<b>BOLD</b>	Concentration is considered to meet Table 9 SCS per Section 49.1(1) of O. Reg. 153/04
~	Indicates Field Duplicate Sample

BH5	0.0 - 0.61	6.09 - 6.70
	25-Sep-24	25-Sep-24
EC	<b>0.882</b>	0.256



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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- SOIL SAMPLE MEETS TABLE 9 SCS FOR EC AND SAR
- SOIL SAMPLE CONSIDERED TO MEET TABLE 9 SCS FOR EC AND SAR

**TITLE AND LOCATION:**

**SOIL ANALYTICAL RESULTS -  
 ELECTRICAL CONDUCTIVITY (EC) AND  
 SODIUM ADSORPTION RATIO (SAR)**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	12

Maxar, Microsoft

E:\BRM\GTR-24000672-C0\060\_Execution\08\_Anc\SIS\GTR-24000672-C0\Phase Two.aprx



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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- SOIL SAMPLE MEETS TABLE 9 SCS FOR PCBs

~ INDICATES A FIELD DUPLICATE SAMPLE

**TITLE AND LOCATION:**

**SOIL ANALYTICAL RESULTS -  
 POLYCHLORINATED BIPHENYLS (PCBs)**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

<small>PROJECT NO.:</small> GTR-24000672-C0	<small>DWN.:</small> JA
<small>SCALE:</small> AS NOTED	<small>CHKD.:</small> AC
<small>DATE:</small> MAY 2025	<small>FIG. NO.:</small> 13

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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- SOIL SAMPLE MEETS TABLE 9 SCS FOR OCs

~ INDICATES A FIELD DUPLICATE SAMPLE

**TITLE AND LOCATION:**

**SOIL ANALYTICAL RESULTS -  
 ORGANOCHLORINE PESTICIDES (OCs)**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

<small>PROJECT NO.:</small> GTR-24000672-CO	<small>DWN:</small> JA
<small>SCALE:</small> AS NOTED	<small>CHKD:</small> AC
<small>DATE:</small> MAY 2025	<small>FIG. NO.:</small> 14

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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- GROUNDWATER SAMPLE MEETS TABLE 9 SCS FOR PHCs INCLUDING BTEX

~ INDICATES A FIELD DUPLICATE SAMPLE

**TITLE AND LOCATION:**  
 GROUNDWATER ANALYTICAL RESULTS -  
 PETROLEUM HYDROCARBONS (PHCs)  
 INCLUDING BENZENE, TOLUENE,  
 ETHYLBENZENE AND XYLENE

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	15

E:\BRM\GTR-24000672-C0\060\_Execution\08\_Anc\SIS\GTR-24000672-C0\Phase Two.aprx



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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- GROUNDWATER SAMPLE MEETS TABLE 9 SCS FOR VOCs

~ INDICATES A FIELD DUPLICATE SAMPLE

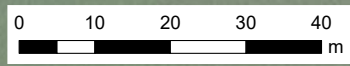
**TITLE AND LOCATION:**

GROUNDWATER ANALYTICAL RESULTS -  
 VOLATILE ORGANIC COMPOUNDS (VOCs)

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	16

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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- GROUNDWATER SAMPLE MEETS TABLE 9 SCS FOR PAHs

~ INDICATES A FIELD DUPLICATE SAMPLE

**TITLE AND LOCATION:**

**GROUNDWATER ANALYTICAL RESULTS -  
 POLYCYCLIC AROMATIC  
 HYDROCARBONS (PAHs)**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	17

Maxar, Microsoft

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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- GROUNDWATER SAMPLE MEETS TABLE 9 SCS FOR METALS

~ INDICATES A FIELD DUPLICATE SAMPLE

**TITLE AND LOCATION:**

**GROUNDWATER ANALYTICAL RESULTS -  
 METALS, HYDRIDE-FORMING METALS  
 AND Cr(VI), CN-, Hg**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

<small>PROJECT NO.:</small> GTR-24000672-CO	<small>DWN:</small> JA
<small>SCALE:</small> AS NOTED	<small>CHKD:</small> AC
<small>DATE:</small> MAY 2025	<small>FIG. NO.:</small> 18

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**LEGEND:**

- APPROXIMATE SITE BOUNDARY
- GROUNDWATER SAMPLE MEETS TABLE 9 SCS FOR Na AND Cl

~ INDICATES A FIELD DUPLICATE SAMPLE

**TITLE AND LOCATION:**

GROUNDWATER ANALYTICAL RESULTS -  
 SODIUM (Na) AND CHLORIDE (Cl)

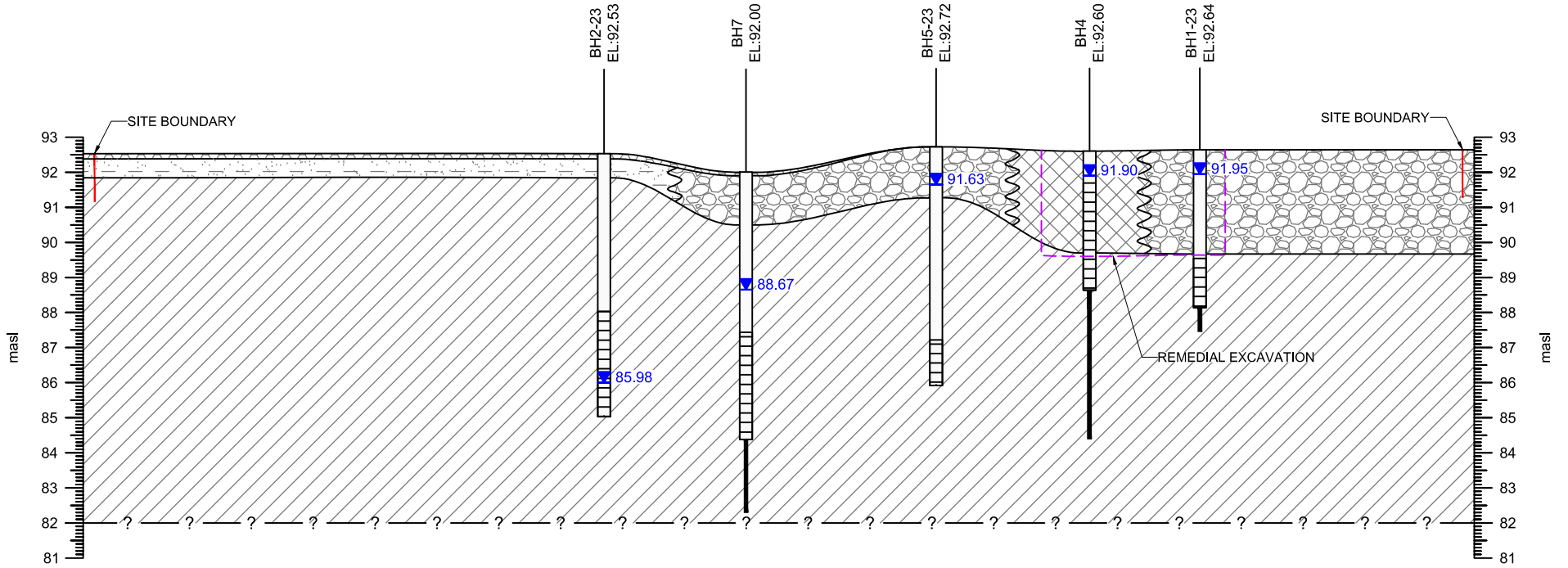
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	19

E:\BRM\GTR-24000672-C0\060\_Execution\08\_Anc\SIG\GTR-24000672-C0\Phase Two.aprx

A  
NORTHWEST

A'  
SOUTHEAST



VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:



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LEGEND:

- TOPSOIL
- SILTY SAND
- FILL
- REWORKED NATIVE
- SILTY CLAY TILL

GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024

TITLE AND LOCATION:

CROSS SECTION A-A'  
  
 PHASE TWO ESA  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:

GTR-24000672-C0

DWN.:

MS

SCALE:

AS NOTED

CK:

AC

DATE:

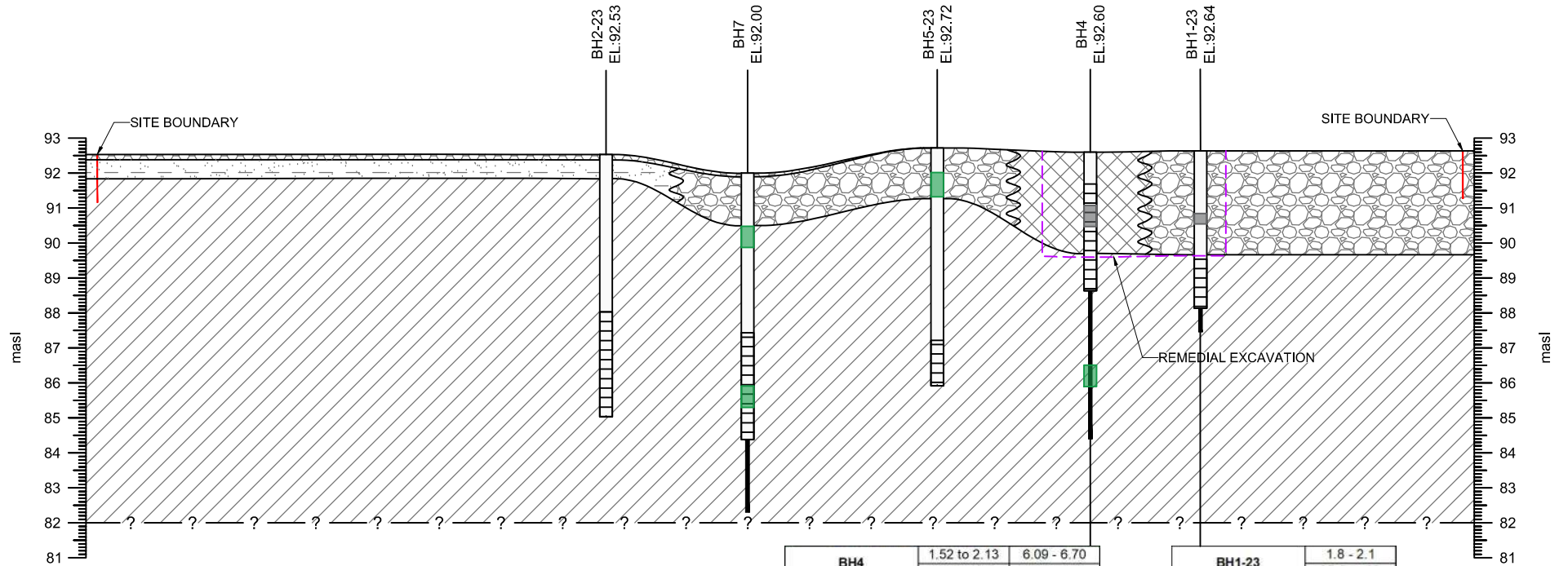
MAY 2025

FIG. NO.:

20

A  
NORTHWEST

A'  
SOUTHEAST



BH4	1.52 to 2.13	6.09 - 6.70
	24-Sep-24	24-Sep-24
PHC F2 (C10-C16)	229	<10

BH1-23	1.8 - 2.1
	25-Sep-23
PHC F2 (C10-C16)	137
PHC F3 (C16-C34)	1150
PHC F4 (C34-C50)	1340

**Legend**

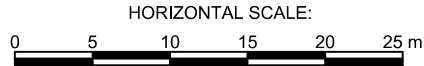
Sample ID	Sample Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (µg/g)

2011 MECP Table 9 SCS <sup>(1)</sup>		
Parameter	Units	Conc.
PHC F2 (C10-C16)	µg/g	10

<sup>(1)</sup>MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition, for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use, and medium to fine textured soils

**BOLD** Denotes Sample Representing Soils Removed During Remedial Excavation or Considered Remediated  
~ Indicates Field Duplicate Sample

VERTICAL SCALE: AS SHOWN



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**LEGEND:**

- TOPSOIL
- SILTY SAND
- FILL
- REWORKED NATIVE
- SILTY CLAY TILL
- SOIL SAMPLE MEETS TABLE 9 SCS
- SOIL SAMPLE REMOVED DURING REMEDIAL EXCAVATION OR CONSIDERED REMEDIATED

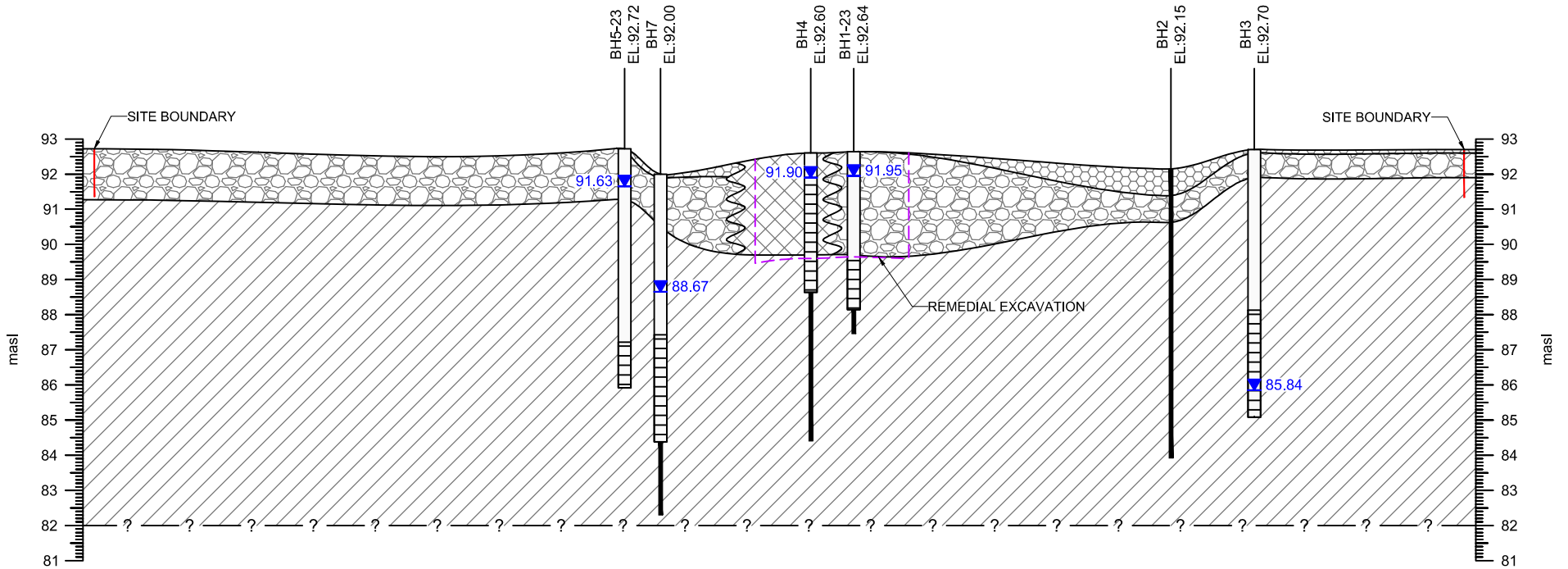
TITLE AND LOCATION:  
**CROSS SECTION A-A'**  
**SOIL ANALYTICAL RESULTS -**  
**PETROLEUM HYDROCARBONS (PHCs)**  
**INCLUDING BENZENE, TOLUENE,**  
**ETHYLBENZENE AND XYLENE**  
PHASE TWO ESA  
1544 AND 1546 FOUR MILE CREEK ROAD  
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN.:
GTR-24000672-C0	MS
SCALE:	CK:
AS NOTED	AC
DATE:	FIG. NO.:
MAY 2025	20A

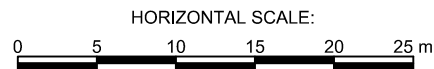
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B  
SOUTHWEST

B'  
NORTHEAST



VERTICAL SCALE: AS SHOWN



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- LEGEND:
- TOPSOIL
  - REWORKED NATIVE
  - FILL
  - SILTY CLAY TILL

GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024

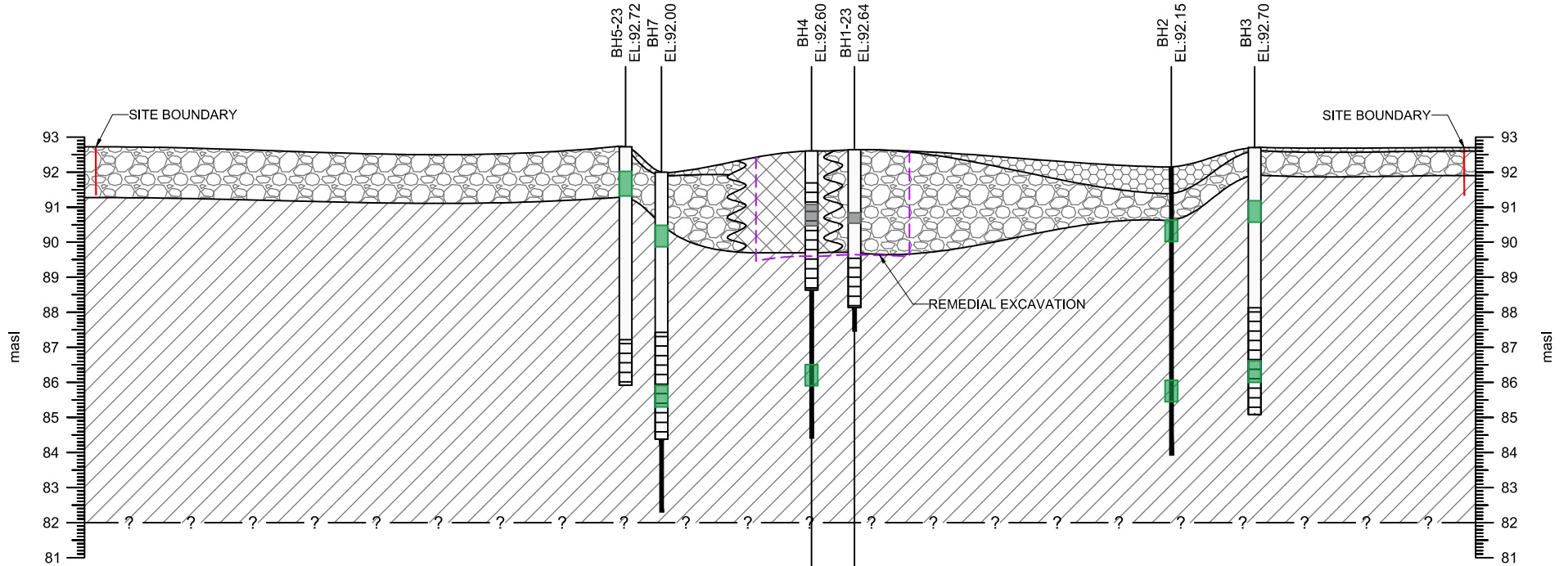
TITLE AND LOCATION:

**CROSS SECTION B-B'**  
  
 PHASE TWO ESA  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	GTR-24000672-C0	DWN.:	MS
SCALE:	AS NOTED	CK:	AC
DATE:	MAY 2025	FIG. NO.:	21

B  
SOUTHWEST

B'  
NORTHEAST



BH4	1.52 to 2.13	6.09 - 6.70
	24-Sep-24	24-Sep-24
PHC F2 (C10-C16)	<b>229</b>	<10

BH1-23	1.8 - 2.1
	25-Sep-23
PHC F2 (C10-C16)	<b>137</b>
PHC F3 (C16-C34)	<b>1150</b>
PHC F4 (C34-C50)	<b>1340</b>

**Legend**

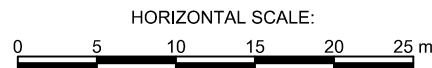
Sample ID	Sample Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (µg/g)

2011 MECP Table 9 SCS <sup>(1)</sup>		
Parameter	Units	Conc.
PHC F2 (C10-C16)	µg/g	10

<sup>(1)</sup>MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition, for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use, and medium to fine textured soils

**BOLD** Denotes Sample Representing Soils Removed During Remedial Excavation or Considered Remediated  
~ Indicates Field Duplicate Sample

VERTICAL SCALE: AS SHOWN



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**LEGEND:**

- TOPSOIL
- REWORKED NATIVE
- FILL
- SILTY CLAY TILL

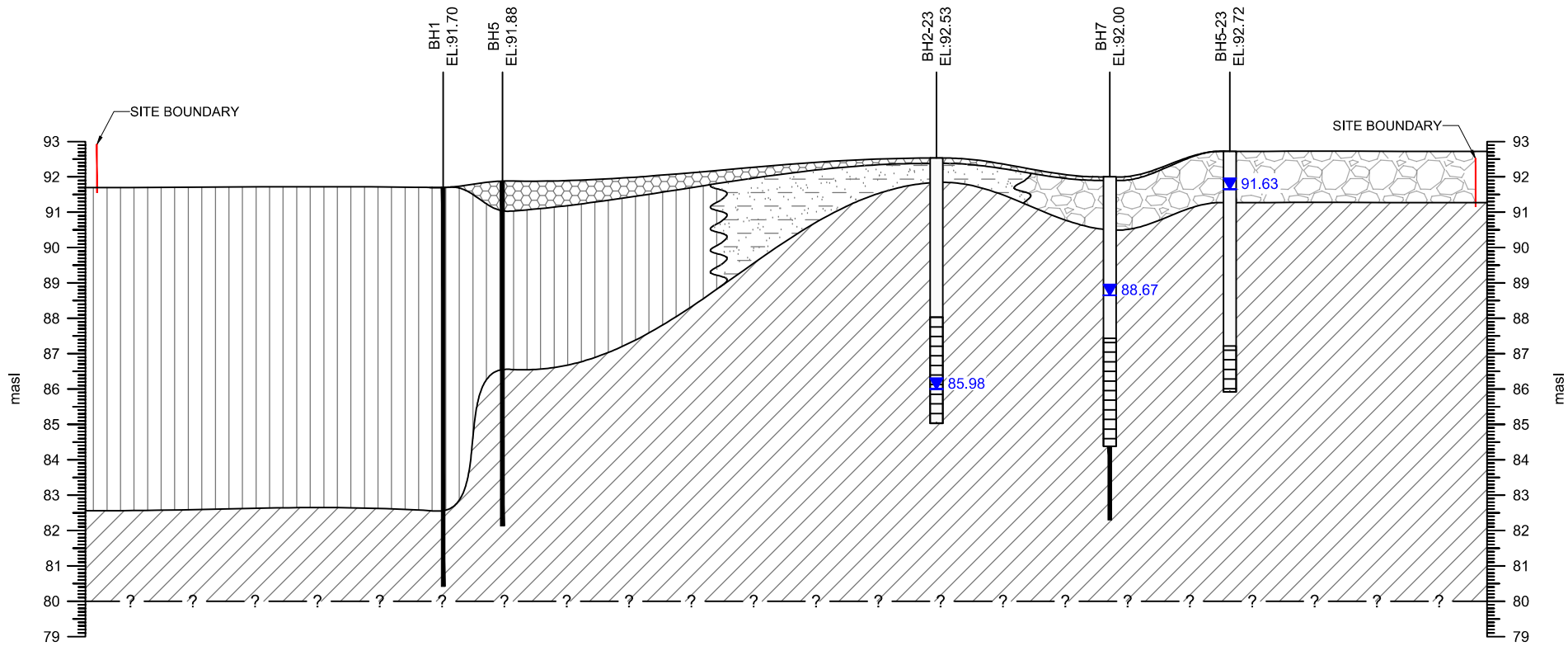
- SOIL SAMPLE MEETS TABLE 9 SCS
- SOIL SAMPLE REMOVED DURING REMEDIAL EXCAVATION OR CONSIDERED REMEDIATED

TITLE AND LOCATION:  
**CROSS SECTION B-B'**  
**SOIL ANALYTICAL RESULTS -**  
**PETROLEUM HYDROCARBONS (PHCs)**  
**INCLUDING BENZENE, TOLUENE,**  
**ETHYLBENZENE AND XYLENE**  
PHASE TWO ESA  
1544 AND 1546 FOUR MILE CREEK ROAD  
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	GTR-24000672-C0	DWN.:	MS
SCALE:	AS NOTED	CK:	AC
DATE:	MAY 2025	FIG. NO.:	21A

C  
NORTH

C'  
SOUTH



VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:



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LEGEND:

- TOPSOIL
- SILTY SAND
- REWORKED NATIVE
- SILTY CLAY
- SILTY CLAY TILL

GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024

TITLE AND LOCATION:

**CROSS SECTION C-C'**  
  
 PHASE TWO ESA  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:

GTR-24000672-C0

DWN.:

MS

SCALE:

AS NOTED

CK:

AC

DATE:

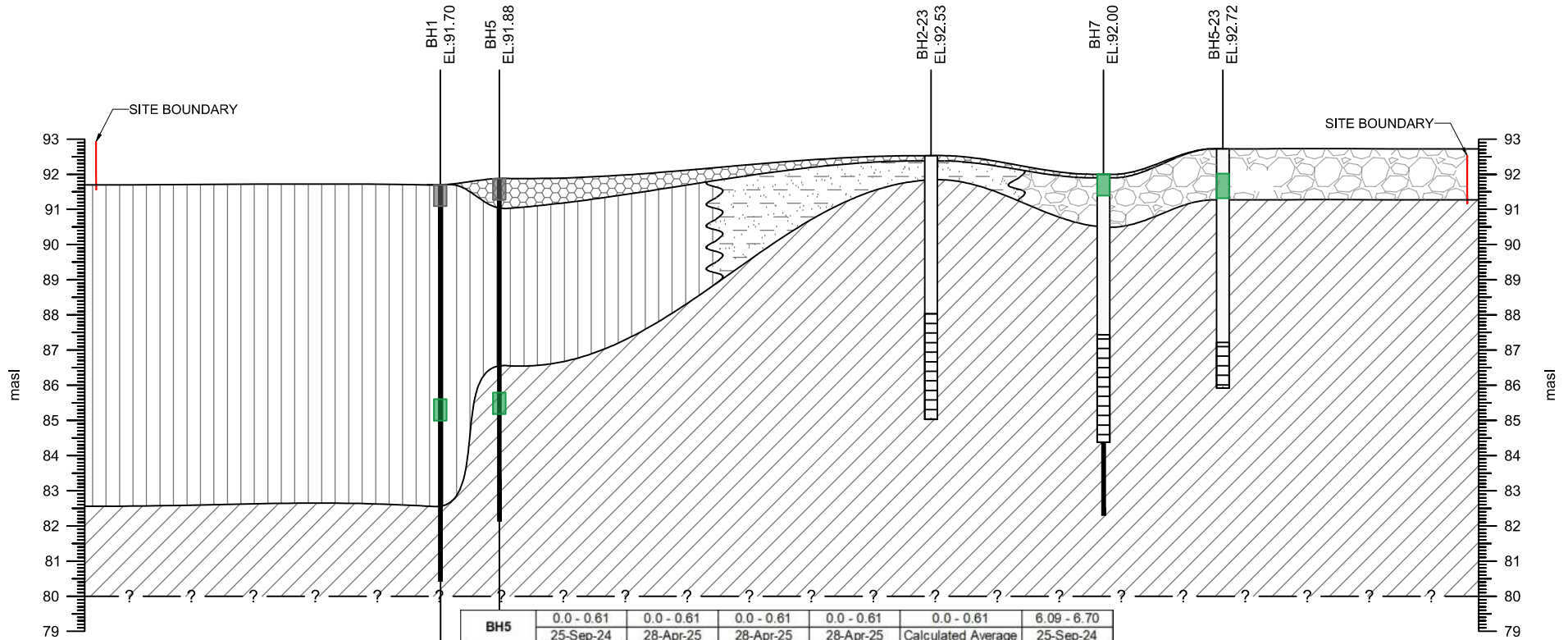
MAY 2025

FIG. NO.:

22

C  
NORTH

C'  
SOUTH



BH5	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	6.09 - 6.70
	25-Sep-24	28-Apr-25	28-Apr-25	28-Apr-25	Calculated Average	25-Sep-24
pH	<b>11.4</b>	6.93	7.01	9.15	7.27	6.95

BH1	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	6.09 - 6.70
	25-Sep-24	28-Apr-25	28-Apr-25	28-Apr-25	Calculated Average	25-Sep-24
pH	<b>9.18</b>	7.05	6.7	6.93	6.99	7.03

**Legend**

Sample ID	Sample Depth (m bgs)
	Date (dd-mm-yy)
Parameter	pH units

Allowable Range*		
Parameter	Units	Value
pH - Surface Soils (< 1.5 m)	pH units	5 - 9
pH - Subsurface Soils (> 1.5 m)	pH units	5 - 11

\* O. Reg. 153/04 allowable range of soil pH for application of the generic Table 9 SCS

**BOLD** pH value considered to meet Table 9 SCS (resampled and averaged)  
 ~ Indicates Field Duplicate Sample

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:



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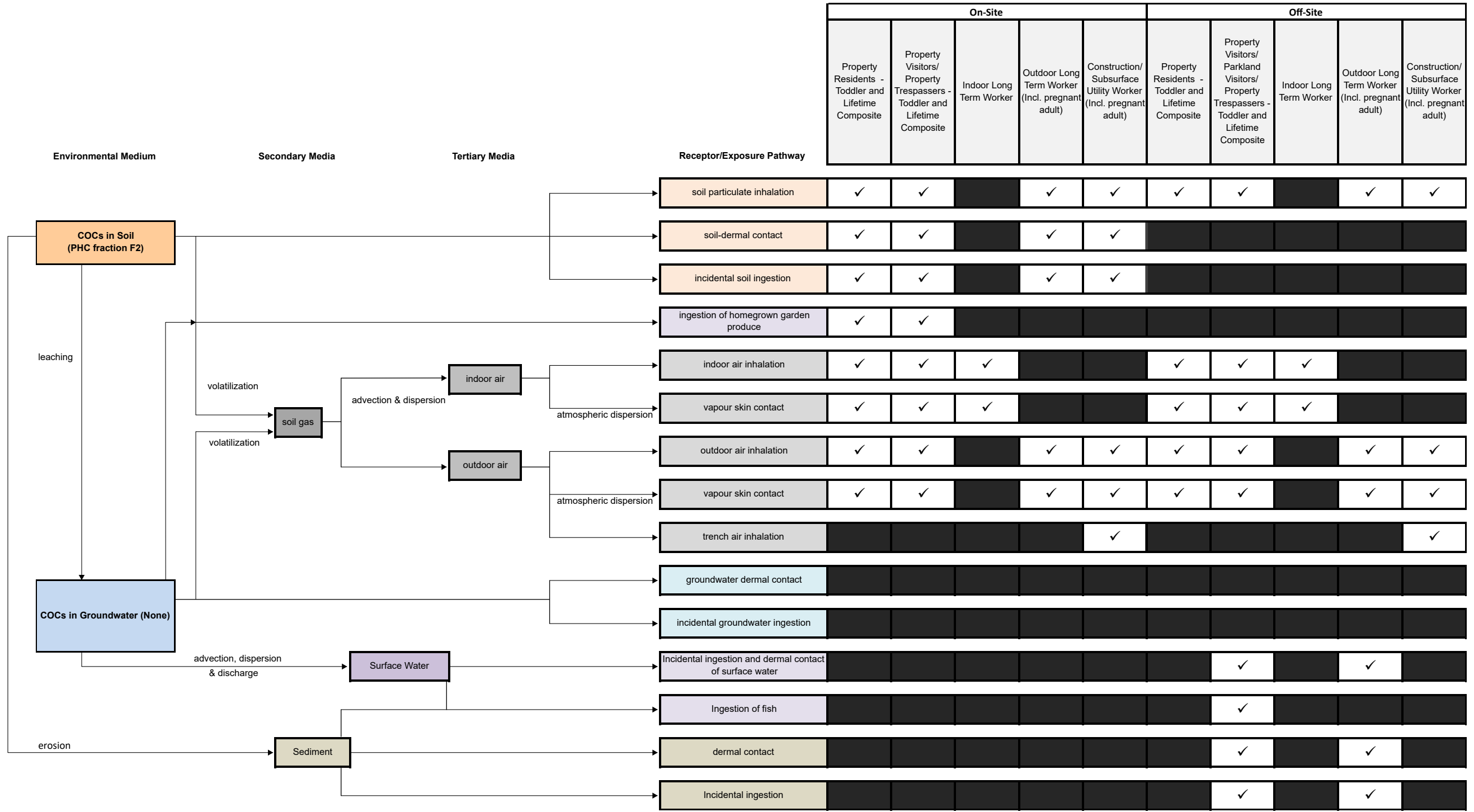
**LEGEND:**

- TOPSOIL
- SILTY SAND
- REWORKED NATIVE
- SILTY CLAY
- SILTY CLAY TILL
- SOIL SAMPLE MEETS TABLE 9 SCS
- SOIL SAMPLE IS CONSIDERED TO MEET TABLE 9 SCS (RESAMPLED AND AVERAGED)

**TITLE AND LOCATION:**  
 CROSS SECTION C-C'  
 SOIL ANALYTICAL RESULTS -  
 METALS, HYDRIDE-FORMING METALS  
 AND OTHER REGULATED PARAMETERS  
 (B-HWS, Cr(VI), Hg, CN-, pH)  
 PHASE TWO ESA  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	GTR-24000672-C0	DWN.:	MS
SCALE:	AS NOTED	CK:	AC
DATE:	MAY 2025	FIG. NO.:	22A

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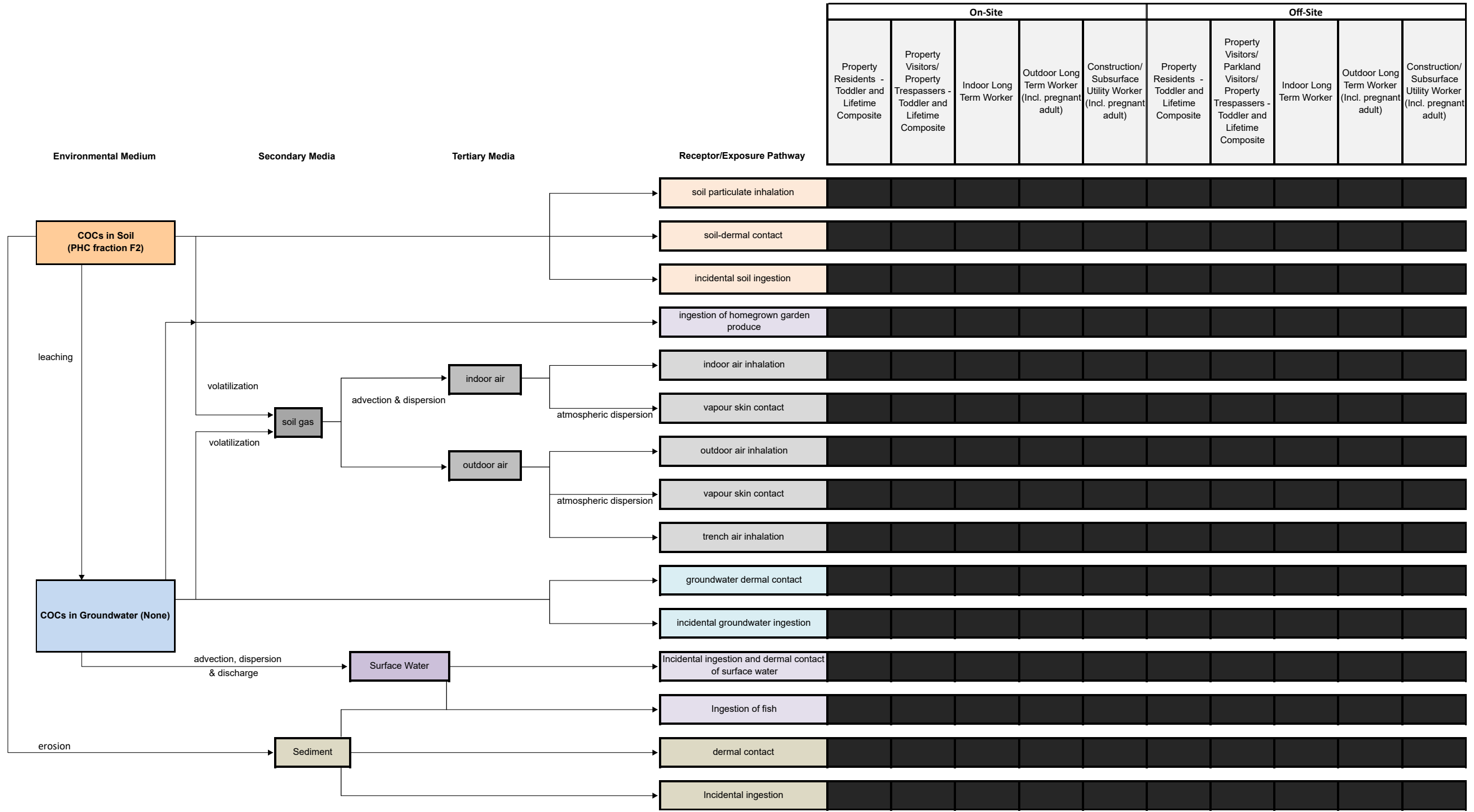


LEGEND:

☐	Pathway is incomplete
✓	Pathway is complete

TITLE AND LOCATION:  
 PRE-REMEDIATION ON- AND OFF-SITE  
 HUMAN HEALTH CONCEPTUAL SITE MODEL  
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHRD:	AC
DATE:	MAY 2025	FIG. NO.:	23A

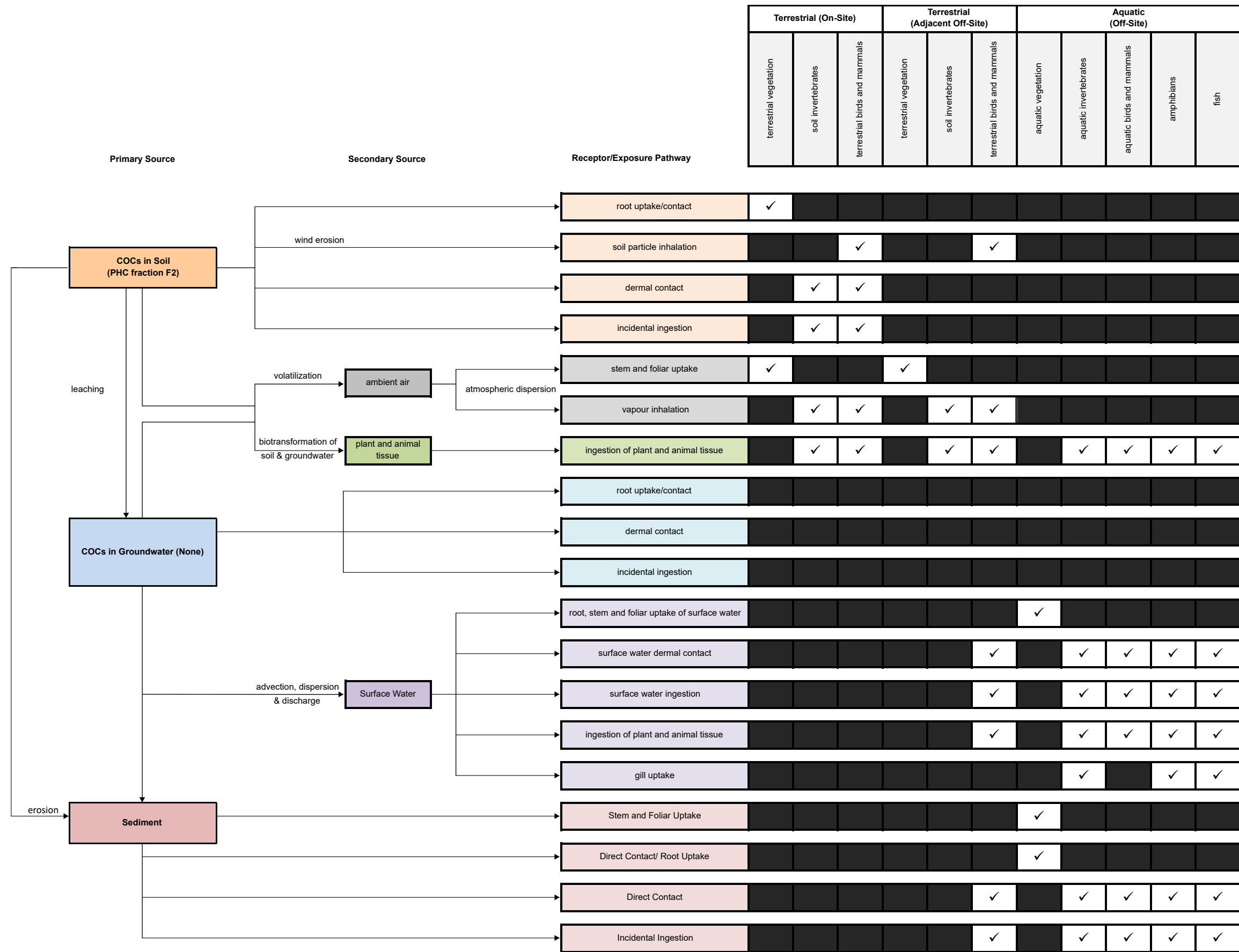


LEGEND:

	Pathway is incomplete
✓	Pathway is complete

PROJECT NO.:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHRD:	AC
DATE:	MAY 2025	FIG. NO.:	23B

E:\BRW\GTR-24000672-C0\060\_Environment\88\_Acc\GIS\GTR-24000672-C0\Phase Two.aprx

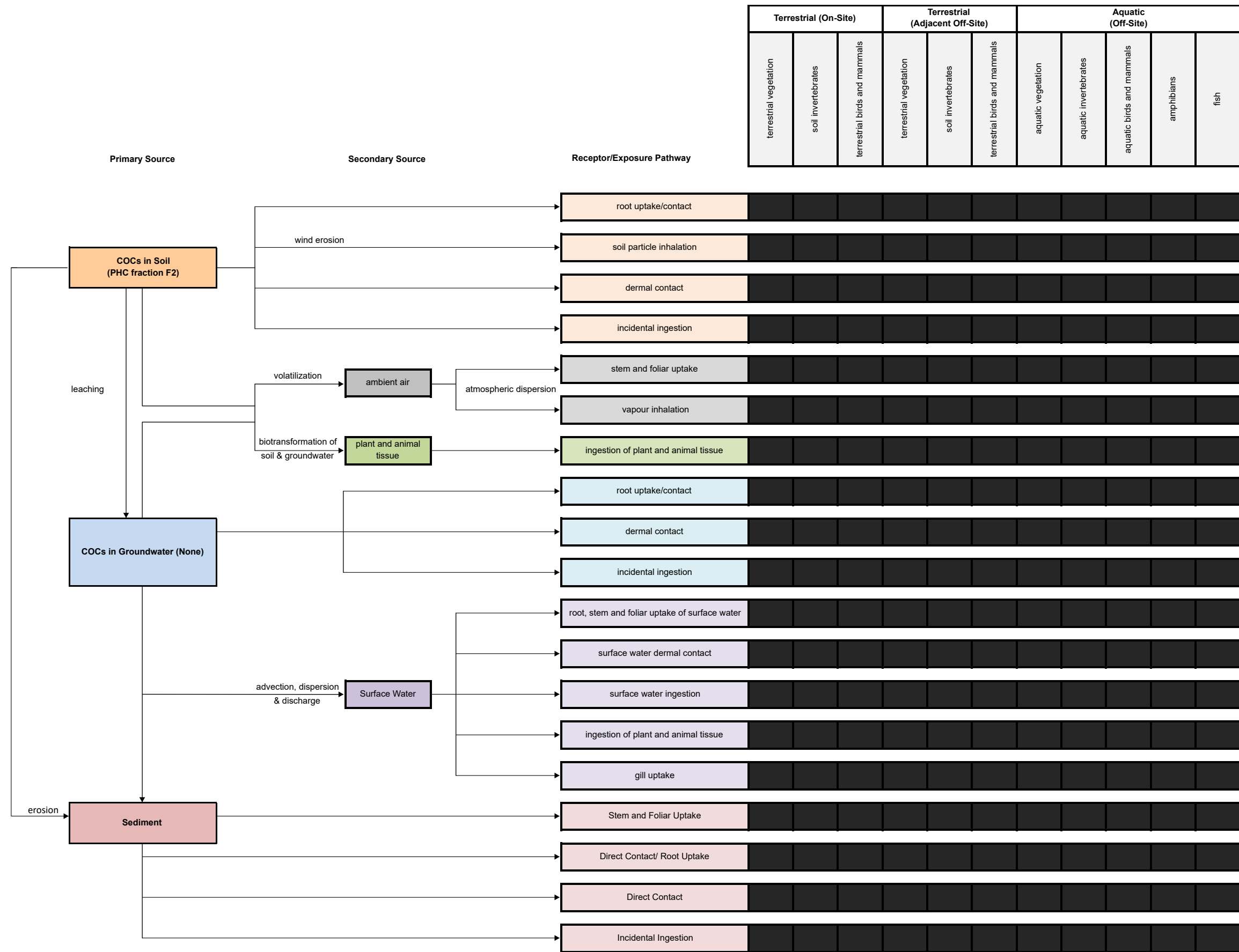


LEGEND:

	Pathway is incomplete
✓	Pathway is complete

TITLE AND LOCATION:  
 PRE-REMEDIATION ON- AND OFF-SITE  
 ECOLOGICAL CONCEPTUAL SITE MODEL  
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHRD:	AC
DATE:	MAY 2025	FIG. NO.:	24A



LEGEND:

☐	Pathway is incomplete
☑	Pathway is complete

TITLE AND LOCATION:  
**POST-REMEDIATION ON- AND OFF-SITE  
 ECOLOGICAL CONCEPTUAL SITE MODEL**  
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHRD:	AC
DATE:	MAY 2025	FIG. NO.:	24B

EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Tables

# Table 1: SITE ENVIRONMENTAL SETTING DATA

1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 May 2025

## NATIVE SOIL

Type: silty clay to clayey silt till  
 Hydraulic Conductivity  
     > 10<sup>-3</sup> cm/s: \_\_\_\_\_  
     <10<sup>-3</sup> to >10<sup>-6</sup> cm/s: 1 x 10<sup>-7</sup>  
     < 10<sup>-6</sup> cm/s: \_\_\_\_\_  
 Soil Texture: Fine  
 Estimated or Measured: Measured by geotechnical investigations

## GROUND WATER

Depth to Water Table: 0.405 to 6.700 mbgs  
 Estimated or Measured: Measured (EXP, 2024)  
 Direction of Flow: North to Northwest  
 Estimated or Measured: Measured (EXP, 2024)

## MUNICIPAL SERVICES

Piped Water: Yes  
 Ground Water Source: Yes  
 Distance to Well: N/A  
 Surface Water Source: Lake Ontario  
 Sanitary Sewer: Yes  
 Storm Sewer: Yes

## PRIVATE SERVICES

Distance to Nearest Well: N/A  
 Approximate Depth of Well: N/A  
 Private Sanitary Sewage: N/A

## SURFACE WATER

Name of water body: Lower Virgil Reservoir  
 Distance from site: 5 m West  
 Elevation drop from site: 5 m  
 Direct Drainage from site: No



## Table 2: DARCY'S LAW CALCULATIONS

Page 1 of 1

1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 May 2025

$$Q=kiA \quad v=ki/n \quad t=T/v$$

Permeability  $k$  (m/sec)\* = 1.00E-09  
 (cm/sec) = 1.00E-07  
 Gradient  $i$  (m/m) = 0.010  
 Porosity\*\*  $n$  = 0.2  
 Thickness  $T$  (m) = NA

Velocity  $v$  (m/sec) = 5.00E-11  
 (feet/sec) = 1.64E-10  
 (feet/day) = 1.42E-05  
 (feet/year) = 5.17E-03  
 (metres/year) = 0.0016

Permeability for clayey silt calculated (EXP, 2023).  
 Effective porosity based on published values (McWhorter and Sunada, 1977).  
 Average gradient calculated (EXP, 2024).



**Table 3: ELEVATIONS OF WELLS AND GROUNDWATER TABLE**

1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 May 2025

Monitoring Well ID	Elevation at Ground Surface (masl)	Depth to Top of Screen (mbgs)	Depth to Bottom of Screen (mbgs)	Ground Water Depth Below Ground Surface (m)	Ground Water Table Elevation (masl)	Date of Measurement
BH1-23 *	92.64	3.10	4.50	0.41	92.24	2-Oct-24
				0.70	91.95	2-Dec-24
BH2-23	92.53	4.50	7.50	1.67	90.87	2-Oct-24
				6.00	90.64	21-Nov-24
				6.55	85.98	2-Dec-24
BH5-23	92.72	5.5	6.80	1.44	91.28	2-Oct-24
				1.89	90.83	21-Nov-24
				1.10	91.63	2-Dec-24
BH3	92.54	4.57	7.62	DRY	DRY	2-Oct-24
				5.75	86.79	21-Nov-24
				6.70	85.84	2-Dec-24
BH4 *	92.60	0.91	3.96	0.51	92.10	2-Oct-24
				0.51	92.09	21-Nov-24
				0.70	91.90	2-Dec-24
BH7	92.43	4.57	7.62	DRY	DRY	2-Oct-24
				4.34	88.09	21-Nov-24
				3.76	88.67	2-Dec-24

NOTES:

masl means "metres above sea level".

installed by other consultants

\* Monitoring well decommissioned (EXP, 2025)



**TABLE 4A - Summary of Soil Samples Submitted for Chemical Analysis**

1544 &amp; 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

Soil Sample ID	Sample Depth Interval (m)	Rationale	Analysis
BH1-SS1	0.0 - 0.61	Assess fill of unknown quality	Metals, ORPs, PCBs
BH1-SS2	0.76 - 1.37		PHCs, VOCs, PAHs
BH1-SS7	6.09 - 6.70		pH
BH2-SS2	0.76 - 1.37	Assess former orchard/vineyard, horizontally delineate historical PHC exceedances at BH1-23	PHCs, Metals, ORPs, OCPs
BH2-SS3	1.52 - 2.13	Horizontally delineate historical PHC exceedances at BH1-23	PHCs, VOCs
BH2-SS7	6.09 - 6.70		PHCs, VOCs
BH3-SS1	0.0 - 0.61	Assess location of vent/fill pipes	Metals, ORPs
BH3-SS2	0.76 - 1.37	Assess former orchard/vineyard, location of vent/fill pipes	PAHs, OCPs
BH3-SS3	1.52 - 2.13	Assess location of vent/fill pipes	PHCs, VOCs
BH3-SS7	6.09 - 6.70		PHCs, VOCs
BH4-SS2	0.76 - 1.37	Assess former orchard/vineyard, former USTs, horizontally delineate historical PHC exceedances at BH1-23, assess marine and equipment repair shop	PAHs, Metals, ORPs, OCPs
BH4-SS3	1.52 - 2.13	Assess former USTs, horizontally delineate historical PHC exceedances at BH1-23, assess marine and equipment repair shop	PHCs, VOCs
BH4-SS7	6.09 - 6.70		PHCs, VOCs
BH5-SS1	0.0 - 0.61	Assess fill of unknown quality	Metals, ORPs
BH5-SS2	0.76 - 1.37		PHCs, VOCs, PAHs, PCBs
BH5-SS7	6.09 - 6.70		EC, pH
BH7-SS1	0.0 - 0.61	Assess repair shop	Metals, ORPs
BH7-SS2	0.76 - 1.37	Assess former orchard/vineyard and repair shop	PAHs, OCPs
BH7-SS3	1.52 - 2.13	Assess repair shop and horizontally delineate historical PHC exceedances at BH1-23	PHCs, VOCs
BH7-SS7	6.09 - 6.70		PHCs, VOCs
BH1A SS1	0.0 - 0.61	Assess pH exceedance	pH
BH1B SS1	0.0 - 0.61		
BH1C SS1	0.0 - 0.61		
BH5A SS1	0.0 - 0.61	Assess pH exceedance	pH
BH5B SS1	0.0 - 0.61		
BH5C SS1	0.0 - 0.61		
<b>QA/QC Samples:</b>			
BH7-SS1-0	0.0 - 0.61	Duplicate of BH7-SS1	Metals, ORPs
BH7-SS2-0	0.76 - 1.37	Duplicate of BH7-SS2	PAHs, OCPs
BH7-SS3-0	1.52 - 2.13	Duplicate of BH7-SS3	PHCs, VOCs

ORPs - Other Regulated Parameters (B-HWS, Cr(VI), Hg, CN-, EC, SAR)

PCBs - Polychlorinated Biphenyls

OCPs - Organochlorine Pesticides

PAH - Polycyclic Aromatic Hydrocarbons

PHC - Petroleum Hydrocarbons

BTEX - Benzene, Toluene, Ethylbenzene and Xylenes

VOC - Volatile Organic Compounds

**TABLE 4B - Summary of Groundwater Samples Submitted for Chemical Analysis**

1544 &amp; 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

GW Sample ID	Sampling Date	Rationale	Analysis
BH1-23	2-Oct-24	Investigation of former USTs	PHCs, VOCs, PAHs, Metals, ORPs
BH2-23	2-Oct-24	Investigation of marine and equipment repair shop	PHCs, VOCs, PAHs, Metals, ORPs
	21-Nov-24		Metals, ORPs
BH5-23	2-Oct-24	Investigation of marine and equipment repair shop	PHCs, VOCs, PAHs, Metals, ORPs
	21-Nov-24		Metals, ORPs
	2-Dec-24		Metals, ORPs
BH4	2-Oct-24	Investigation of former USTs	PHCs, VOCs, PAHs, Metals, ORPs
	21-Nov-24		PHCs, PAHs
	2-Dec-24		PHCs, PAHs
BH3	21-Nov-24	Investigation of location of former vent/fill pipes	PHCs, VOCs, PAHs, Metals, ORPs
	2-Dec-24		Metals, ORPs
BH7	21-Nov-24	Investigation of marine and equipment repair shop	PHCs, VOCs, PAHs, Metals, ORPs
	2-Dec-24		Metals, ORPs
<b>QA/QC Samples:</b>			
BH5-23-0	2-Oct-24	Duplicate of BH5-23	PHCs, VOCs, PAHs, Metals, ORPs
TRIP BLANK	2-Oct-24	Trip Blank	VOCs
TRIP BLANK	21-Nov-24	Trip Blank	VOCs
BH7-0	21-Nov-24	Duplicate of BH7	PHCs, VOCs, PAHs, Metals, ORPs
	2-Dec-24	Duplicate of BH7	Metals, ORPs
BH4-0	2-Dec-24	Duplicate of BH4	PHCs, PAHs

ORPs - Hot Water Soluble Boron, Cyanide, Mercury, Hexavalent Chromium, Electrical Conductivity and Sodium Adsorption Ratio

PAH - Polyaromatic Hydrocarbons

PHC - Petroleum Hydrocarbons

BTEX - Benzene, Toluene, Ethylbenzene and Xylenes

VOC - Volatile Organic Compound



**Table 5A: MAXIMUM SOIL CONCENTRATION DATA - Petroleum Hydrocarbons**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 9 Soil Standards**
Benzene	0.02	<0.02	0.02
Toluene	0.02	<0.02	0.2
Ethylbenzene	0.02	<0.02	0.05
m-Xylene + p-Xylene	0.04	<0.04	NV
o-Xylene	0.02	<0.02	NV
Xylenes (Total)	0.04	<0.04	0.05
PHC F1 (C6-C10)	10	13	25
PHC F1 (C6-C10) - BTEX	10	13	25
PHC F2 (C10-C16)	10 (<7)	<b>229</b>	10
PHC F3 (C16-C34)	50	177	240
PHC F4 (C34-C50)	50	<50	120

**NOTES:**

Analysis by AGAT Labs.

All results in ppm (ug/g) and based on dry weight basis.

\* Minimum Reporting Detection Limit is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\* Standards are shown for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional/Commercial/Community/Industrial property use (coarse and/or fine textured soil).

Exceedances of Table 9 Standards are shown in bold.

Soil exceedance has been remediated and removed from Site (EXP, 2025)



**Table 5B: MAXIMUM SOIL CONCENTRATION DATA - Volatile Organic Compounds**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 May 2025

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 9 Soil Standards**
Acetone	0.5	<0.50	0.5
Benzene	0.02	<0.02	0.02
Bromodichloromethane	0.05	<0.05	0.05
Bromoform	0.05	<0.05	0.05
Bromomethane	0.05	<0.05	0.05
Carbon Tetrachloride	0.05	<0.05	0.05
Chlorobenzene	0.05	<0.05	0.05
Chloroform	0.05	<0.04	0.05
Dibromochloromethane	0.05	<0.05	0.05
1,2-Dichlorobenzene	0.05	<0.05	0.05
1,3-Dichlorobenzene	0.05	<0.05	0.05
1,4-Dichlorobenzene	0.05	<0.05	0.05
Dichlorodifluoromethane	0.05	<0.05	0.05
1,1-Dichloroethane	0.05	<0.02	0.05
1,2-Dichloroethane	0.05	<0.03	0.05
1,1-Dichloroethylene	0.05	<0.05	0.05
cis-1,2-Dichloroethylene	0.05	<0.02	0.05
trans-1,2-Dichloroethylene	0.05	<0.05	0.05
1,2-Dichloropropane	0.05	<0.03	0.05
cis- & trans-1,3-Dichloropropene	0.05	<0.05	0.05
Ethylbenzene	0.02	<0.05	0.05
Ethylene Dibromide (1,2-Dibromoethane)	0.05	<0.04	0.05
Hexane (n)	0.05	<0.05	0.05
Methylene chloride (Dichloromethane)	0.05	<0.05	0.05
Methyl ethyl ketone (2-Butanone)	0.5	<0.50	0.5
Methyl Isobutyl Ketone	0.5	<0.50	0.5
Methyl t-butyl ether (MTBE)	0.05	<0.05	0.05
Styrene	0.05	<0.05	0.05
1,1,1,2-Tetrachloroethane	0.05	<0.04	0.05
1,1,2,2-Tetrachloroethane	0.05	<0.05	0.05
Tetrachloroethylene	0.05	<0.05	0.05
Toluene	0.02	<0.05	0.2
1,1,1-Trichloroethane	0.05	<0.05	0.05
1,1,2-Trichloroethane	0.05	<0.04	0.05
Trichloroethylene	0.05	<0.03	0.05
Trichlorofluoromethane	0.05	<0.05	0.25
Vinyl Chloride	0.02	<0.02	0.02
m-Xylene + p-Xylene	0.02	<0.05	NV
o-Xylene	0.02	<0.05	NV
Xylenes (total)	0.02	<0.05	0.05

NOTES:  
 Analysis by AGAT Labs.  
 All results in ppm (ug/g) and based on dry weight basis.  
 \* Minimum Reporting Detection Limit is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.  
 \*\* Standards are shown for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional/Commercial/Community/Industrial property use (coarse and/or fine textured soil).  
 Exceedances of Table 9 Standards are shown in bold.



**Table 5C: MAXIMUM SOIL CONCENTRATION DATA - Polycyclic Aromatic Hydrocarbons**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 9 Soil Standards**
Acenaphthene	0.05	<0.05	0.072
Acenaphthylene	0.05	<0.05	0.093
Anthracene	0.05	<0.05	0.16
Benzo(a)anthracene	0.05	<0.05	0.36
Benzo(a)pyrene	0.05	<0.05	0.3
Benzo(b/j)fluoranthene	0.05	<0.05	0.47
Benzo(ghi)perylene	0.05	<0.05	0.68
Benzo(k)fluoranthene	0.05	<0.05	0.48
Chrysene	0.05	<0.05	2.8
Dibenz(a,h)anthracene	0.05	<0.05	0.1
Fluoranthene	0.05	<0.05	0.56
Fluorene	0.05	<0.05	0.12
Indeno(1,2,3-cd)pyrene	0.05	<0.05	0.23
Naphthalene	0.05	<0.05	0.09
Phenanthrene	0.05	<0.05	0.69
Pyrene	0.05	<0.05	1
1&2-Methylnaphthalene	0.05	<0.05	0.59

NOTES:

Analysis by AGAT Labs and Bureau Veritas Labs.

All results in ppm (ug/g) and based on dry weight basis.

\* Minimum Reporting Detection Limit is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\* Standards are shown for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional/Commercial/Community/Industrial property use (coarse and/or fine textured soil).

Exceedances of Table 9 Standards are shown in bold.



**Table 5D: MAXIMUM SOIL CONCENTRATION DATA - Metals and Other Regulated Parameters**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 9 Soil Standards**
<b>Metals</b>			
Antimony	0.8	<0.8	1.3
Arsenic	1	7	18
Barium	2	163	220
Beryllium	0.5	1.1	2.5
Boron (Total)	5	12	36
Cadmium	0.5	0.7	1.2
Chromium (total)	5	52	70
Cobalt	0.8	10.5	21
Copper	1	49	92
Lead	1	49	120
Molybdenum	0.5	1.9	2
Nickel	1	25	82
Selenium	0.8	1.4	1.5
Silver	0.5	<0.5	0.5
Thallium	0.5	<0.5	1
Uranium	0.5	1.57	2.5
Vanadium	2	29.4	86
Zinc	5	240	290
<b>Other Regulated Parameters</b>			
Boron (hot water soluble)	0.1	0.89	1.5
Chromium VI	0.2	<0.2	0.66
Free Cyanide	0.04	<0.040	0.051
Mercury	0.1	<0.10	0.27
Electrical Conductivity (mS/cm)	0.005	<b>0.882</b>	0.7
Sodium Adsorption Ratio (unitless)	NV	0.825	5
pH (pH Units)	NV	<b>11.4</b>	5-9 (surface soil); 5-11 (subsurface soil)

**NOTES:**

Analysis by AGAT Labs.

All results in ppm (ug/g) and based on dry weight basis.

\* Minimum Reporting Detection Limit is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\* Standards are shown for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional/Commercial/Community/Industrial property use (coarse and/or fine textured soil).

Exceedances of Table 9 Standards are shown in bold.

Additional sampling and averaging to a pH of 7.27 (EXP, 2025)



**Table 5E: MAXIMUM SOIL CONCENTRATION DATA - Polychlorinated Biphenyls**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 9 Soil Standards**
Total Polychlorinated Biphenyls	0.1	<0.1	0.3

**NOTES:**

Analysis by AGAT Labs.

All results in ppm (ug/g) and based on dry weight basis.

\* Minimum Reporting Detection Limit is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\* Standards are shown for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional/Commercial/Community/Industrial property use (coarse and/or fine textured soil).

Exceedances of Table 9 Standards are shown in bold.



**Table 5F: MAXIMUM SOIL CONCENTRATION DATA - Metals and Other Regulated Parameters**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 May 2025

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 9 Soil Standards**
Hexachloroethane	0.005	<0.005	0.01
Gamma-Hexachlorocyclohexane	0.005	<0.005	0.01
Heptachlor	0.005	<0.005	0.05
Aldrin	0.005	<0.005	0.05
Heptachlor Epoxide	0.005	<0.005	0.05
Endosulfan I	0.005	<0.005	NV
Endosulfan II	0.005	<0.005	NV
Endosulfan	0.005	<0.005	0.04
Alpha-Chlordane	0.005	<0.005	NV
gamma-Chlordane	0.005	<0.005	NV
Chlordane	0.007	<0.007	0.05
op <sup>1</sup> -DDE	0.005	<0.005	NV
pp <sup>1</sup> -DDE	0.005	<0.005	NV
DDE	0.007	<0.007	0.05
op <sup>1</sup> -DDD	0.005	<0.005	NV
pp <sup>1</sup> -DDD	0.005	<0.005	NV
DDD	0.007	<0.007	0.05
op <sup>1</sup> -DDT	0.005	<0.005	NV
pp <sup>1</sup> -DDT	0.005	<0.005	NV
DDT (Total)	0.007	<0.007	1.4
Dieldrin	0.005	<0.005	0.05
Endrin	0.005	<0.005	0.04
Methoxychlor	0.005	<0.005	0.05
Hexachlorobenzene	0.005	<0.005	0.010
Hexachlorobutadiene	0.010	<0.010	0.010

**NOTES:**

Analysis by AGAT Labs.

All results in ppm (ug/g) and based on dry weight basis.

\* Minimum Reporting Detection Limit is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\* Standards are shown for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional/Commercial/Community/Industrial property use (coarse and/or fine textured soil).

Exceedances of Table 9 Standards are shown in bold.



**Table 5G: MAXIMUM GROUNDWATER CONCENTRATION DATA - Petroleum Hydrocarbons**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 9 Ground Water Standards**
Benzene	0.2	<0.20	44
Toluene	0.2	<0.20	14000
Ethylbenzene	0.1	0.81	1800
m-Xylene + p-Xylene	0.2	<0.20	NV
o-Xylene	0.1	<0.10	NV
Xylenes (Total)	0.2	<0.20	3300
PHC F1 (C6-C10)	25	<25	420
PHC F1 (C6-C10) - BTEX	25	<25	420
PHC F2 (C10-C16)	100	<100	150
PHC F3 (C16-C34)	100	<100	500
PHC F4 (C34-C50)	100	<100	500

**NOTES:**

Analysis by AGAT Labs.

All results in ppm (ug/L) and based on dry weight basis.

\* Minimum Reporting Detection Limit is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\* Standards shown are for All Types of Property Use and all textured soils.

Exceedances of Table 9 Standards are shown in bold.



**Table 5H: MAXIMUM GROUNDWATER CONCENTRATION DATA - Volatile Organic Compounds**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 May 2025

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 9 Ground Water Standards**
Acetone	1.0	<1.0	100000
Benzene	0.20	<0.20	44
Bromodichloromethane	0.20	<0.20	67000
Bromoform	0.10	<0.10	380
Bromomethane	0.20	<0.20	5.6
Carbon Tetrachloride	0.20	<0.20	0.79
Chlorobenzene	0.10	<0.10	500
Chloroform	0.20	<0.20	2.4
Dibromochloromethane	0.10	<0.10	65000
1,2-Dichlorobenzene	0.10	<0.10	4600
1,3-Dichlorobenzene	0.10	<0.10	7600
1,4-Dichlorobenzene	0.10	<0.10	8
Dichlorodifluoromethane	0.40	<0.40	3500
1,1-Dichloroethane	0.30	<0.30	320
1,2-Dichloroethane	0.20	<0.20	1.6
1,1-Dichloroethylene	0.30	<0.30	1.6
cis-1,2-Dichloroethylene	0.20	<0.20	1.6
trans-1,2-Dichloroethylene	0.20	<0.20	1.6
1,2-Dichloropropane	0.20	<0.20	16
cis- & trans-1,3-Dichloropropene	0.30	<0.30	5.2
Ethylbenzene	0.10	0.81	1800
Ethylene Dibromide (1,2-Dibromoethane)	0.10	<0.10	0.25
Hexane (n)	0.20	<0.20	51
Methylene chloride (Dichloromethane)	0.30	<0.30	610
Methyl ethyl ketone (2-Butanone)	1.0	<1.0	470000
Methyl Isobutyl Ketone	1.0	<1.0	140000
Methyl t-butyl ether (MTBE)	0.20	<0.20	190
Styrene	0.10	<0.10	1300
1,1,1,2-Tetrachloroethane	0.10	<0.10	3.3
1,1,2,2-Tetrachloroethane	0.10	<0.10	3.2
Tetrachloroethylene	0.20	<0.20	1.6
Toluene	0.20	<0.20	14000
1,1,1-Trichloroethane	0.30	<0.30	640
1,1,2-Trichloroethane	0.20	<0.20	4.7
Trichloroethylene	0.20	<0.20	1.6
Trichlorofluoromethane	0.40	<0.40	2000
Vinyl Chloride	0.17	<0.17	0.5
m-Xylene + p-Xylene	0.20	<0.20	NV
o-Xylene	0.10	<0.10	NV
Xylenes (total)	0.20	<0.20	3300

NOTES:  
 Analysis by AGAT Labs.  
 All results in ppm (ug/L) and based on dry weight basis.  
 \* Minimum Reporting Detection Limit is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.  
 \*\* Standards shown are for All Types of Property Use and all textured soils.  
 Exceedances of Table 9 Standards are shown in bold.



**Table 5I: MAXIMUM GROUNDWATER CONCENTRATION DATA - Polycyclic Aromatic Hydrocarbons**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 9 Ground Water Standards**
Acenaphthene	0.20	0.22	600
Acenaphthylene	0.20	<0.20	1.4
Anthracene	0.10	0.11	1
Benzo(a)anthracene	0.20	<0.20	1.8
Benzo(a)pyrene	0.01	<0.01	0.81
Benzo(b/j)fluoranthene	0.10	<0.10	0.75
Benzo(ghi)perylene	0.20	<0.20	0.2
Benzo(k)fluoranthene	0.10	<0.10	0.4
Chrysene	0.10	0.11	0.7
Dibenz(a,h)anthracene	0.20	<0.20	0.4
Fluoranthene	0.20	0.33	73
Fluorene	0.20	<0.20	290
Indeno(1,2,3-cd)pyrene	0.20	<0.20	0.2
Naphthalene	0.20	0.44	1400
Phenanthrene	0.10	0.22	380
Pyrene	0.20	0.22	5.7
1&2-Methylnaphthalene	0.20	0.22	1500

**NOTES:**

Analysis by AGAT Labs.

All results in ppm (ug/L) and based on dry weight basis.

\* Minimum Reporting Detection Limit is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\* Standards shown are for All Types of Property Use and all textured soils.

Exceedances of Table 9 Standards are shown in bold.



**Table 5J: MAXIMUM GROUNDWATER CONCENTRATION DATA - Metals and Other Regulated Parameters**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 9 Ground Water Standards**
<b>Metals</b>			
Antimony	1.0	<1.0	16000
Arsenic	1.0	11.6	1500
Barium	2.0	159	23000
Beryllium	0.50	<0.50	53
Boron (Total)	10.0	506	36000
Cadmium	0.20	<0.20	2.1
Chromium (total)	2.0	<2.0	640
Cobalt	0.50	5.06	52
Copper	1.0	3.6	69
Lead	0.50	0.61	20
Molybdenum	0.50	16.2	7300
Nickel	1.0	14.9	390
Selenium	1.0	5.3	50
Silver	0.20	<0.20	1.2
Thallium	0.30	<0.30	400
Uranium	0.50	40.7	330
Vanadium	0.40	9.55	200
Zinc	5.0	9.2	890
<b>Other Regulated Parameters</b>			
Chromium VI	2.000	<2.000	110
Free Cyanide	2	<2	52
Mercury	0.02	<0.02	0.29
Sodium	50	355000	1800000
Chloride	100 (122)	328000	1800000

**NOTES:**

Analysis by AGAT Labs.

All results in ppb (ug/L)

\* Minimum Reporting Detection Limit is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\* Standards shown are for All Types of Property Use and all textured soils.

Exceedances of Table 9 Standards are shown in bold.



**SOIL ANALYTICAL RESULTS:**

Table 6 - Petroleum Hydrocarbons including BTEX in Soil  
 GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 May 2025

Location ID	MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition RPIICC Land Use (coarse and/or fine textured soil)	Reporting Detection Limit (RDL)*	BH1	BH2		BH3		BH4		BH5	BH7		
Field Sample ID			BH1 - SS2	BH2-SS3	BH2-SS7	BH3 - SS3	BH3 - SS7	BH4-SS3	BH4-SS7	BH5 - SS2	BH7-SS3	BH7-SS30	BH7-SS7
Lab ID			6182810	6177137	6177143	6182502	6182511	6177146	6177147	6182819	6177168	6177169	6177170
Sampling Date			25-Sep-24	24-Sep-24	24-Sep-24	26-Sep-24	26-Sep-24	24-Sep-24	24-Sep-24	25-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24
Soil Sample Depth (mbgs)			0.76 - 1.37	1.52 - 2.13	6.09 - 6.70	1.52 - 2.13	6.09 - 6.70	1.52 - 2.13	6.09 - 6.70	0.76 - 1.37	1.52 - 2.13	1.52 - 2.13	6.09 - 6.70
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Laboratory			AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis Number	24H202348	24H201833	24H201833	24H202434	24H202434	24H201833	24H201833	24H202348	24H201833	24H201833	24H201833		
Benzene	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Toluene	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
m-Xylene + p-Xylene	NV	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
o-Xylene	NV	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Xylenes (Total)	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
PHC F1 (C6-C10)	25	5	<5	<5	<5	<5	<5	13	<5	<5	<5	<5	
PHC F1 (C6-C10) - BTEX	25	5	<5	<5	<5	<5	<5	13	<5	<5	<5	<5	
PHC F2 (C10-C16)	10	10 (<7)	<7	<10	<10	<7	<7	<b>229</b>	<10	<7	<10	<10	
PHC F3 (C16-C34)	240	50	<50	<50	<50	<50	<50	177	<50	79	<50	<50	
PHC F4 (C34-C50)	120	50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	

All soil concentrations reported in µg/g.

\* Maximum RDL below MECP (2011) SCS

'<' = Parameter below detection limit, as indicated

'NV' = No value

NA = Not applicable or not analyzed

<b>Bold</b>	Concentration exceeds MECP (2011) Table 9 SCS.
	Non-detect but detection limit exceeds the MECP (2011) SCS
	Soil remediated and removed from Site to a maximum of 3.5 mbgs (EXP, 2025)



**SOIL ANALYTICAL RESULTS:**

Table 7 - Volatile Organic Compounds in Soil

GTR-24000672-CO, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Location ID			BH1	BH2		BH3		BH4		BH5	BH7		
Field Sample ID	MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition RPIICC Land Use (coarse and/or fine textured soil)	Reporting Detection Limit (RDL)*	BH1 - SS2	BH2-SS3	BH2-SS7	BH3 - SS3	BH3 - SS7	BH4-SS3	BH4-SS7	BH5 - SS2	BH7-SS3	BH7-SS30	BH7-SS7
Lab ID			6182810	6177137	6177143	6182502	6182511	6177146	6177147	6182819	6177168	6177169	6177170
Sampling Date			25-Sep-24	24-Sep-24	24-Sep-24	26-Sep-24	26-Sep-24	24-Sep-24	24-Sep-24	25-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24
Soil Sample Depth (mbgs)			0.76 - 1.37	1.52 - 2.13	6.09 - 6.70	1.52 - 2.13	6.09 - 6.70	1.52 - 2.13	6.09 - 6.70	0.76 - 1.37	1.52 - 2.13	1.52 - 2.13	6.09 - 6.70
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Laboratory	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	
Certificate of Analysis Number	24H202348	24H201833	24H201833	24H202434	24H202434	24H201833	24H201833	24H202348	24H201833	24H201833	24H201833		
Acetone	0.5	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Benzene	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Bromodichloromethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Bromoform	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Bromomethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Carbon Tetrachloride	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Chlorobenzene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Chloroform	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
Dibromochloromethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,2-Dichlorobenzene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,3-Dichlorobenzene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,4-Dichlorobenzene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Dichlorodifluoromethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,1-Dichloroethane	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
1,2-Dichloroethane	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
1,1-Dichloroethylene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
cis-1,2-Dichloroethylene	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
trans-1,2-Dichloroethylene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,2-Dichloropropane	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
cis- & trans-1,3-Dichloropropane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethylbenzene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Ethylene Dibromide (1,2-Dibromoethane)	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
Hexane (n)	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Methylene chloride (Dichloromethane)	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Methyl ethyl ketone (2-Butanone)	0.5	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Methyl Isobutyl Ketone	0.5	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Methyl t-butyl ether (MTBE)	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Styrene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,1,1,2-Tetrachloroethane	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
1,1,2,2-Tetrachloroethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Tetrachloroethylene	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Toluene	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,1,1-Trichloroethane	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,1,2-Trichloroethane	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
Trichloroethylene	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Trichlorofluoromethane	0.25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Vinyl Chloride	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
m-Xylene + p-Xylene	NV	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
o-Xylene	NV	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Xylenes (total)	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	

All soil concentrations reported in µg/g.

\* Maximum RDL below MECP (2011) SCS

'<' = Parameter below detection limit, as indicated

'NV' = No value

NA = Not applicable or not analyzed

<b>Bold</b>	Concentration exceeds MECP (2011) Table 9 SCS.
<b>Yellow</b>	Non-detect but detection limit exceeds the MECP (2011) SCS
<b>Grey</b>	Soil remediated and removed from Site to a maximum of 3.5 mbgs (EXP, 2025)



**SOIL ANALYTICAL RESULTS:**

Table 8 - Polycyclic Aromatic Hydrocarbons in Soil  
 GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 May 2025

Location ID	MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition RPIICC Land Use (coarse and/or fine textured soil)	Reporting Detection Limit (RDL)*	BH1	BH2	BH3	BH4	BH5	BH7			
Field Sample ID			BH1 - SS2	BH2-SS2	BH3 - SS2	BH4-SS2	BH5 - SS2	BH7-SS2	BH7-SS20		
Lab ID			6182810	6177134	6182499	6177144	6182821	6177152	6177166		
Sampling Date			25-Sep-24	24-Sep-24	26-Sep-24	24-Sep-24	25-Sep-24	24-Sep-24	24-Sep-24		
Soil Sample Depth (mbgs)			0.76 - 1.37	0.76 - 1.37	0.76 - 1.37	0.76 - 1.37	0.76 - 1.37	0.76 - 1.37	0.76 - 1.37		
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP		
Laboratory			AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT		
Certificate of Analysis Number			24H202348	24H201833	24H202434	24H201833	24H202348	24H201833	24H201833		
Acenaphthene			0.072	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene			0.093	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.22	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Benzo(a)anthracene	0.36	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Benzo(a)pyrene	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Benzo(b/j)fluoranthene	0.47	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Benzo(ghi)perylene	0.68	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Benzo(k)fluoranthene	0.48	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Chrysene	2.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Dibenz(a,h)anthracene	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Fluoranthene	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Fluorene	0.19	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Indeno(1,2,3-cd)pyrene	0.23	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Naphthalene	0.09	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Phenanthrene	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Pyrene	1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
1&2-Methylnaphthalene	0.59	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		

All soil concentrations reported in µg/g.

\* Maximum RDL below MECP (2011) SCS

'<' = Parameter below detection limit, as indicated

'NV' = No value

NA = Not applicable or not analyzed

<b>Bold</b>	Concentration exceeds MECP (2011) Table 9 SCS.
	Non-detect but detection limit exceeds the MECP (2011) SCS
	Soil remediated and removed from Site to a maximum of 3.5 mbgs (EXP, 2025)



**SOIL ANALYTICAL RESULTS:**

Table 9 - Metals, Hydride-Forming Metals, and Other Regulated Parameters in Soil  
 GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 May 2025

Location ID	MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition RPIICC Land Use (coarse and/or fine textured soil)	Reporting Detection Limit (RDL)*	BH1						BH2	BH3	BH4	BHS					BH7		
			BH1 - SS1	BH1 - SS7	BH1A SS1	BH1B SS1	BH1C SS1	BH1-average	BH2-SS2	BH3 - SS1	BH4-SS2	BH5 - SS1	BH5 - SS7	BH5A SS1	BH5B SS1	BH5C SS1	BH5-average	BH7-SS1	BH7-SS10
Field Sample ID			6182808	6182817	6694866	6694868	6694869	-	6177134	6182498	6177144	6182818	6182820	6694870	6694871	6694872	-	6177150	6177151
Lab ID			25-Sep-24	25-Sep-24	28-Apr-25	28-Apr-25	28-Apr-25	-	24-Sep-24	26-Sep-24	24-Sep-24	25-Sep-24	25-Sep-24	28-Apr-25	28-Apr-25	28-Apr-25	-	24-Sep-24	24-Sep-24
Sampling Date			0.0 - 0.61	6.09 - 6.70	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.76 - 1.37	0.0 - 0.61	0.76 - 1.37	0.0 - 0.61	6.09 - 6.70	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61	0.0 - 0.61
Soil Sample Depth (mbgs)			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Consultant			AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Laboratory			24H202348	24H202348	25H282733	25H282733	25H282733	-	24H201833	24H202434	24H201833	24H202348	24H202348	25H282733	25H282733	25H282733	-	24H201833	24H201833
Certificate of Analysis Number																			
<b>Metals</b>																			
Antimony	1.3	0.8	<0.8	-	-	-	-	-	<0.8	<0.8	<0.8	<0.8	-	-	-	-	-	<0.8	<0.8
Arsenic	18	1	4	-	-	-	-	-	6	4	2	2	-	-	-	-	-	5	7
Barium	220	2	75.8	-	-	-	-	-	121	109	23.3	163	-	-	-	-	-	60.2	71.9
Beryllium	2.5	0.5	<0.5	-	-	-	-	-	0.7	0.5	<0.5	1.1	-	-	-	-	-	<0.5	0.6
Boron (Total)	36	5	11	-	-	-	-	-	11	6	<5	12	-	-	-	-	-	8	9
Cadmium	1.2	0.5	<0.5	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	0.6	0.7
Chromium (total)	70	5	35	-	-	-	-	-	21	18	6	52	-	-	-	-	-	15	17
Cobalt	22	0.8	1.8	-	-	-	-	-	10.5	6.7	3.1	<0.8	-	-	-	-	-	6.7	8.2
Copper	92	1	10.8	-	-	-	-	-	28.3	20.2	10.7	11.8	-	-	-	-	-	32.6	49
Lead	120	1	20	-	-	-	-	-	6	39	6	6	-	-	-	-	-	35	49
Molybdenum	2	0.5	0.5	-	-	-	-	-	0.6	0.6	<0.5	<0.5	-	-	-	-	-	1.2	1.9
Nickel	82	1	5	-	-	-	-	-	25	15	7	2	-	-	-	-	-	15	18
Selenium	1.5	0.8	<0.8	-	-	-	-	-	<0.8	<0.8	<0.8	1.4	-	-	-	-	-	<0.8	<0.8
Silver	0.5	0.5	<0.5	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	<0.5
Thallium	1	0.5	<0.5	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	<0.5	<0.5
Uranium	2.5	0.5	0.54	-	-	-	-	-	0.51	0.71	<0.50	1.57	-	-	-	-	-	<0.50	<0.50
Vanadium	86	2	10.4	-	-	-	-	-	29.4	26.9	10.5	7.3	-	-	-	-	-	17.6	20
Zinc	290	5	97	-	-	-	-	-	48	80	29	21	-	-	-	-	-	152	240
<b>Other Regulated Parameters</b>																			
Boron (hot water soluble)	1.5	0.1	0.16	-	-	-	-	-	0.35	0.49	<0.10	0.34	-	-	-	-	-	0.77	0.89
Chromium VI	0.66	0.2	<0.2	-	-	-	-	-	<0.2	<0.2	<0.2	<0.2	-	-	-	-	-	<0.2	<0.2
Free Cyanide	0.051	0.04	<0.040	-	-	-	-	-	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	<0.040	<0.040
Mercury	0.27	0.1	<0.10	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	-	-	-	-	-	<0.10	<0.10
Electrical Conductivity (mS/cm)	0.7	0.005	0.34	-	-	-	-	-	0.185	0.178	0.257	<b>0.882</b>	0.256	-	-	-	-	0.328	0.283
Sodium Adsorption Ratio (unitless)	5	NV	0.825	-	-	-	-	-	0.431	0.203	0.234	0.308	-	-	-	-	-	0.324	0.322
pH (pH Units)	5-9 (surface soil); 5-11 (subsurface soil)	NV	<b>9.18</b>	7.03	7.05	6.7	6.93	6.99	7.46	6.87	7.38	<b>11.4</b>	6.95	6.93	7.01	9.15	7.27	7.24	7.14

All soil concentrations reported in µg/g.

\* Maximum RDL below MECP (2011) SCS

'c' = Parameter below detection limit, as indicated

'NV' = No value

NA = Not applicable or not analyzed

- Bold** Concentration exceeds MECP (2011) Table 9 SCS.
- Non-detect but detection limit exceeds the MECP (2011) SCS
- Soil remediated and removed from Site to a maximum of 3.5 mbgs (EXP, 2025)



**SOIL ANALYTICAL RESULTS:**

Table 10 - Polychlorinated Biphenyls in Soil  
 GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 May 2025

Location ID	MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition RPIICC Land Use (coarse and/or fine textured soil)	Reporting Detection Limit (RDL)*	BH1		BH5
			BH1 - SS1	BH1 - SS1-0	BH5 - SS2
Field Sample ID			6182808	6182809	6182821
Lab ID			25-Sep-2024	25-Sep-2024	25-Sep-2024
Sampling Date			0.0 - 0.61	0.0 - 0.61	0.76 - 1.37
Soil Sample Depth (mbgs)			EXP	EXP	EXP
Consultant			AGAT	AGAT	AGAT
Laboratory			24H202348	24H202348	24H202348
Certificate of Analysis Number			<0.1	<0.1	<0.1
Total Polychlorinated Biphenyls	0.3	0.1			

All soil concentrations reported in µg/g.

\* Maximum RDL below MECP (2011) SCS

'<' = Parameter below detection limit, as indicated

'NV' = No value

NA = Not applicable or not analyzed

<b>Bold</b>	Concentration exceeds MECP (2011) Table 9 SCS.
	Non-detect but detection limit exceeds the MECP (2011) SCS



**SOIL ANALYTICAL RESULTS:**

Table 11 - Organochlorine Pesticides in Soil

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Location ID	MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition RPIICC Land Use (coarse and/or fine textured soil)	Reporting Detection Limit (RDL)*	BH2	BH3	BH4	BH7	
Field Sample ID			BH2-SS2	BH3 - SS2	BH4-SS2	BH7-SS2	BH7-SS20
Lab ID			6177134	6182499	6177144	6177152	6177166
Sampling Date			24-Sep-24	26-Sep-24	24-Sep-24	24-Sep-24	24-Sep-24
Soil Sample Depth (mbgs)			0.76 - 1.37	0.76 - 1.37	0.76 - 1.37	0.76 - 1.37	0.76 - 1.37
Consultant			EXP	EXP	EXP	EXP	EXP
Laboratory			AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis Number			24H201833	24H202434	24H201833	24H201833	24H201833
Aldrin	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Alpha-Chlordane	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT (Total)	1.4	0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan I	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan II	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
gamma-Chlordane	NV	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Gamma-Hexachlorocyclohexane	0.01	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.02	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.01	0.010	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloroethane	0.01	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Methoxychlor	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005

All soil concentrations reported in µg/g.

\* Maximum RDL below MECP (2011) SCS

'<' = Parameter below detection limit, as indicated

'NV' = No value

NA= Not applicable or not analyzed

<b>Bold</b>	Concentration exceeds MECP (2011) Table 9 SCS.
	Non-detect but detection limit exceeds the MECP (2011) SCS
	Soil remediated and removed from Site to a maximum of 3.5 mbgs (EXP, 2025)



**GROUNDWATER ANALYTICAL RESULTS:**

Table 12 - Petroleum Hydrocarbons including BTEX in Groundwater  
 GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
 May 2025

Location ID	MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition RPIICC Land Use (groundwater)	Reporting Detection Limit (RDL)*	BH1-23	BH2-23	BH3	BH4				BH7		BH5-23	
Field Sample ID			BH1-23	BH2-23	BH3	BH4	BH4	BH4	BH4-0	BH7	BH7-0	BH5-23	BH5-23-0
Lab ID			6194108	6194109	6348736	6194080	6348782	6376784	6376832	6348778	6348779	6194111	6194131
Sampling Date			2-Oct-2024	2-Oct-2024	21-Nov-2024	2-Oct-2024	21-Nov-2024	2-Dec-2024	2-Dec-2024	21-Nov-2024	21-Nov-2024	2-Oct-2024	2-Oct-2024
Screen Interval Depth (mbgs)			3.05 - 4.57	4.42 - 7.47	4.57 - 7.62	0.91 - 3.96	0.91 - 3.96	0.91 - 3.96	0.91 - 3.96	4.57 - 7.62	4.57 - 7.62	5.33 - 6.85	5.33 - 6.85
Consultant	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	
Laboratory	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	
Certificate of Analysis Number	24H204750	24H204750	24H224127	24H204750	24H224127	24H227786	24H227786	24H224127	24H224127	24H204750	24H204750		
Benzene	44	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	14000	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	1800	0.1	<0.10	<0.10	<0.10	0.81	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m-Xylene + p-Xylene	NV	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
o-Xylene	NV	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylenes (Total)	3300	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
PHC F1 (C6-C10)	420	25	<25	<25	<25	<25	-	<25	<25	<25	<25	<25	<25
PHC F1 (C6-C10) - BTEX	420	25	<25	<25	<25	<25	-	<25	<25	<25	<25	<25	<25
PHC F2 (C10-C16)	150	100	<100	<100	<100	<100	-	<100	<100	<100	<100	<100	<100
PHC F3 (C16-C34)	500	100	<100	<100	<100	<100	-	<100	<100	<100	<100	<100	<100
PHC F4 (C34-C50)	500	100	<100	<100	<100	<100	-	<100	<100	<100	<100	<100	<100

All groundwater concentrations reported in µg/L.

\* Maximum RDL below MECP (2011) SCS

'<' = Parameter below detection limit, as indicated

'NV' = No value

NA = Not applicable or not analyzed

<b>Bold</b>	Concentration exceeds MECP (2011) Table 9 SCS.
	Non-detect but detection limit exceeds the MECP (2011) SCS
	Monitoring well decommissioned prior to remediation activities (EXP, 2025)



**GROUNDWATER ANALYTICAL RESULTS:**

Table 13 - Volatile Organic Compounds in Groundwater

GTR-24000672-CO, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Location ID	MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition	Reporting Detection Limit (RDL)*	BH1-23	BH2-23	BH3	BH4	BH7		BH5-23		Trip Blank	Trip Blank
Field Sample ID			BH1-23	BH2-23	BH3	BH4	BH7	BH7-0	BH5-23	BH5-23-0	Trip Blank	Trip Blank
Lab ID			6194108	6194109	6348736	6194080	6348778	6348779	6194111	6194131	6194133	6348732
Sampling Date			2-Oct-2024	2-Oct-2024	21-Nov-2024	2-Oct-2024	21-Nov-2024	21-Nov-2024	2-Oct-2024	2-Oct-2024	2-Oct-2024	21-Nov-2024
Screen Interval Depth (mbgs)			3.05 - 4.57	4.42 - 7.47	4.57 - 7.62	0.91 - 3.96	4.57 - 7.62	4.57 - 7.62	5.33 - 6.85	5.33 - 6.85	-	-
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Laboratory			AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis Number			24H204750	24H204750	24H224127	24H204750	24H224127	24H224127	24H204750	24H204750	24H204750	24H224127
Acetone	100000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	44	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	67000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	380	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Bromomethane	5.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	0.79	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	500	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	2.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	65000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	4600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	7600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	8	0.10	<0.10	<0.10	<0.30	<0.10	<0.30	<0.30	<0.10	<0.10	<0.10	<0.10
Dichlorodifluoromethane	3500	0.4	<0.40	<0.40	<0.10	<0.40	<0.10	<0.10	<0.40	<0.40	<0.40	<0.40
1,1-Dichloroethane	320	0.30	<0.30	<0.30	<0.40	<0.30	<0.40	<0.40	<0.30	<0.30	<0.30	<0.30
1,2-Dichloroethane	1.6	0.20	<0.20	<0.20	<0.30	<0.20	<0.30	<0.30	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethylene	1.6	0.30	<0.30	<0.30	<0.20	<0.30	<0.20	<0.20	<0.30	<0.30	<0.30	<0.30
cis-1,2-Dichloroethylene	1.6	0.20	<0.20	<0.20	<0.30	<0.20	<0.30	<0.30	<0.20	<0.20	<0.20	<0.20
trans-1,2-Dichloroethylene	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	16	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
cis- & trans-1,3-Dichloropropene	5.2	0.30	<0.30	<0.30	<0.20	<0.30	<0.20	<0.20	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	1800	0.10	<0.10	<0.10	<0.10	0.81	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide (1,2-Dibromoethane)	0.25	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Hexane (n)	51	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methylene chloride (Dichloromethane)	610	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl ethyl ketone (2-Butanone)	470000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Isobutyl Ketone	140000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl t-butyl ether (MTBE)	190	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Styrene	1300	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,1,2-Tetrachloroethane	3.3	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	3.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	14000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	640	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1,2-Trichloroethane	4.7	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	2000	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
m-Xylene + p-Xylene	NV	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
o-Xylene	NV	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylenes (total)	3300	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

All groundwater concentrations reported in µg/L.

\* Maximum RDL below MECP (2011) SCS

'<' = Parameter below detection limit, as indicated

NA= Not applicable or not analyzed

'NV'= No value

<b>Bold</b>	Concentration exceeds MECP (2011) Table 9 SCS.
	Non-detect but detection limit exceeds the MECP (2011) SCS
	Monitoring well decommissioned prior to remediation activities (EXP, 2025)



## GROUNDWATER ANALYTICAL RESULTS:

Table 14 - Polycyclic Aromatic Hydrocarbons in Groundwater

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

Location ID	MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition RPIICC Land Use (groundwater)	Reporting Detection Limit (RDL)*	BH1-23	BH2-23	BH3	BH4				BH7		BH5-23	
Field Sample ID			BH1-23	BH2-23	BH3	BH4	BH4	BH4	BH4-0	BH7	BH7-0	BH5-23	BH5-23-0
Laboratory ID			6194108	6194109	6348736	6194080	6348782	6376784	6376832	6348778	6348779	6194111	6194131
Sampling Date			2-Oct-2024	2-Oct-2024	21-Nov-2024	2-Oct-2024	21-Nov-2024	2-Dec-2024	2-Dec-2024	21-Nov-2024	21-Nov-2024	2-Oct-2024	2-Oct-2024
Screen Interval Depth (mbgs)			3.05 - 4.57	4.42 - 7.47	4.57 - 7.62	0.91 - 3.96	0.91 - 3.96	0.91 - 3.96	0.91 - 3.96	4.57 - 7.62	4.57 - 7.62	5.33 - 6.85	5.33 - 6.85
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Laboratory			AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis Number			24H204750	24H204750	24H224127	24H204750	24H224127	24H227786	24H227786	24H224127	24H224127	24H204750	24H204750
Acenaphthene	600	0.20	0.22	<0.20	<0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Acenaphthylene	1.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Anthracene	1	0.10	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Benzo(a)anthracene	1.8	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Benzo(a)pyrene	0.81	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Benzo(b/j)fluoranthene	0.75	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Benzo(ghi)perylene	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Benzo(k)fluoranthene	0.4	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Chrysene	0.7	0.10	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Dibenz(a,h)anthracene	0.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Fluoranthene	73	0.20	<0.20	<0.20	<0.20	0.33	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Fluorene	290	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Indeno(1,2,3-cd)pyrene	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Naphthalene	1400	0.20	<0.20	<0.20	<0.20	0.440	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Phenanthrene	380	0.10	<0.10	<0.10	<0.10	0.220	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Pyrene	5.7	0.20	<0.20	<0.20	<0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
1&2-Methylnaphthalene	1500	0.20	<0.20	<0.20	<0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	

All groundwater concentrations reported in µg/L.

\* Maximum RDL below MECP (2011) SCS

'<' = Parameter below detection limit, as indicated

NA= Not applicable or not analyzed

'NV'= No value

<b>Bold</b>	Concentration exceeds MECP (2011) Table 9 SCS.
<b>Yellow</b>	Non-detect but detection limit exceeds the MECP (2011) SCS
<b>Grey</b>	Monitoring well decommissioned prior to remediation activities (EXP, 2025)



**GROUNDWATER ANALYTICAL RESULTS:**

Table 15 - Metals, Hydride-Forming Metals and Other Regulated Parameters in Groundwater

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Location ID	MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition RPIICC Land Use (groundwater)	Reporting Detection Limit (RDL)*	BH1-23	BH2-23		BH3		BH4	BH7				BH5-23			
Field Sample ID			BH1-23	BH2-23	BH2-23	BH3	BH3	BH4	BH7	BH7-0	BH7	BH7-0	BH5-23	BH5-23-0	BH5-23	BH5-23
Lab ID			6194108	6194109	6348733	6348736	6376783	6194080	6348778	6348779	6376833	6376834	6194111	6194131	6348735	6376835
Sampling Date			2-Oct-2024	2-Oct-2024	21-Nov-2024	21-Nov-2024	2-Dec-2024	2-Oct-2024	21-Nov-2024	21-Nov-2024	2-Dec-2024	2-Dec-2024	2-Oct-2024	2-Oct-2024	21-Nov-2024	2-Dec-2024
Screen Interval Depth (mbgs)			3.05 - 4.57	4.42 - 7.47	4.42 - 7.47	4.57 - 7.62	4.57 - 7.62	0.91 - 3.96	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	5.33 - 6.85	5.33 - 6.85	5.33 - 6.85	5.33 - 6.85
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Laboratory			AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis Number			24H204750	24H204750	24H224127	24H224127	24H227786	24H204750	24H224127	24H224127	24H227786	24H227786	24H204750	24H204750	24H224127	24H227786
<b>Metals</b>																
Antimony	16000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	1500	1.0	3.7	1.1	<1.0	<1.0	<1.0	11.6	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	3.7	1.8
Barium	23000	2.0	70.9	27.7	24.3	23.7	21.8	159	24.3	25.2	22.5	24.7	33.8	31.5	32.7	28
Beryllium	53	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Boron (Total)	36000	10.0	65	431	476	488	506	119	498	448	471	435	256	257	313	291
Cadmium	2.1	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium (total)	640	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Cobalt	52	0.50	<0.50	<0.50	<0.50	1.81	1.23	<0.50	2.43	2.06	2.64	2.59	4.43	5.06	0.74	4.5
Copper	69	1.0	<1.0	<1.0	1.1	3	1.5	<1.0	1.3	1.7	1.2	1.4	<1.0	<1.0	3.6	2.3
Lead	20	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.61
Molybdenum	7300	0.50	12	15.7	12.6	11.9	11.3	6.83	15.7	15.5	9.78	16.2	4.7	8.37	6.71	4.26
Nickel	390	1.0	1.5	2.3	4.1	7.9	10.8	1.9	7.8	4.5	4.5	4.6	14.9	11.5	12.2	12.1
Selenium	50	1.0	<1.0	3.4	4.1	4.2	<1.0	<1.0	4.5	4.1	<1.0	2.1	5.3	3.2	4.2	<1.0
Silver	1.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	400	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Uranium	330	0.50	<0.50	13.7	13.4	21.3	20.3	0.88	13.2	12.8	11.2	11.7	27.9	27.6	40.7	30.8
Vanadium	200	0.40	<0.40	1.57	0.87	<0.40	<0.40	<0.40	1.4	0.96	0.78	1.56	0.5	<0.40	9.55	4.72
Zinc	890	5.0	<5.0	<5.0	<5.0	9.2	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.1
<b>Other Regulated Parameters</b>																
Chromium VI	110	2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000	<2.000
Free Cyanide	52	2	<2	<2	-	-	<2	<2	-	-	<2	<2	<2	<2	-	<2
Mercury	0.29	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sodium	1800000	50	14100	230000	-	-	309000	29000	-	-	256000	254000	327000	339000	-	355000
Chloride	1800000	100 (122)	30000	169000	-	-	127000	16800	-	-	150000	148000	315000	319000	-	328000

All groundwater concentrations reported in µg/L.

\* Maximum RDL below MECP (2011) SCS

'<' = Parameter below detection limit, as indicated

'NV' = No value

NA = Not applicable or not analyzed

**Bold** Concentration exceeds MECP (2011) Table 9 SCS.

**Yellow** Non-detect but detection limit exceeds the MECP (2011) SCS

**Grey** Monitoring well decommissioned prior to remediation activities (EXP, 2025)



EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Appendix A – Limitations and Use of Report



## LIMITATIONS AND USE OF REPORT

### BASIS OF REPORT

The Report is based on site conditions known or inferred by the investigation undertaken as of the date of the Report. Should changes occur which potentially impact the condition of the site the recommendations of EXP may require re-evaluation. Where special concerns exist, or the Client has special considerations or requirements, these should be disclosed to EXP to allow for additional or special investigations to be undertaken not otherwise within the scope of investigation conducted for the purpose of the Report.

Where applicable, recommended field services are the minimum necessary to ascertain that construction is being carried out in general conformity with building code guidelines, generally accepted practices and EXP's recommendations. Any reduction in the level of services recommended will result in EXP providing qualified opinions regarding the adequacy of the work. EXP can assist design professionals or contractors retained by the Client to review applicable plans, drawings, and specifications as they relate to the Report or to conduct field reviews during construction.

### RELIANCE ON INFORMATION PROVIDED

The evaluation and conclusions contained in the Report are based on conditions in evidence at the time of site inspections and information provided to EXP by the Client and others. The Report has been prepared for the specific site, development, building, design or building assessment objectives and purpose as communicated by the Client. EXP has relied in good faith upon such representations, information and instructions and accepts no responsibility for any deficiency, misstatement or inaccuracy contained in the Report as a result of any misstatements, omissions, misrepresentation or fraudulent acts of persons providing information. Unless specifically stated otherwise, the applicability and reliability of the findings, recommendations, suggestions or opinions expressed in the Report are only valid to the extent that there has been no material alteration to or variation from any of the information provided to EXP.

### STANDARD OF CARE

This report ("Report") has been prepared in a manner consistent with the degree of care and skill exercised by engineering consultants currently practicing under similar circumstances and locale. No other warranty, expressed or implied, is made. Unless specifically stated otherwise, the Report does not contain environmental consulting advice.

### COMPLETE REPORT

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment form part of the Report. This material includes, but is not limited to, the terms of reference given to EXP by the Client, communications between EXP and the Client, other reports, proposals or documents prepared by EXP for the Client in connection with the site described in the Report. In order to properly understand the suggestions, recommendations and opinions expressed in the Report, reference must be made to the Report in its entirety. EXP is not responsible for use by any party of portions of the Report.



## USE OF REPORT

The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client. No other party may use or rely upon the Report in whole or in part without the written consent of EXP. Any use of the Report, or any portion of the Report, by a third party are the sole responsibility of such third party. EXP is not responsible for damages suffered by any third party resulting from unauthorised use of the Report.

## REPORT FORMAT

Where EXP has submitted both electronic file and a hard copy of the Report, or any document forming part of the Report, only the signed and sealed hard copy shall be the original documents for record and working purposes. In the event of a dispute or discrepancy, the hard copy shall govern. Electronic files transmitted by EXP utilize specific software and hardware systems. EXP makes no representation about the compatibility of these files with the Client's current or future software and hardware systems. Regardless of format, the documents described herein are EXP's instruments of professional service and shall not be altered without the written consent of EXP.

EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Appendix B – Plan of Survey



ASSOCIATION OF ONTARIO  
LAND SURVEYORS  
PLAN SUBMISSION FORM  
V-67863

THIS PLAN IS NOT VALID  
UNLESS IT IS AN EMBOSSED  
ORIGINAL COPY  
ISSUED BY THE SURVEYOR  
In accordance with  
Regulation 1505, Section 29(3)

PLAN OF SURVEY  
(WITH TOPOGRAPHIC DETAIL) OF  
**PART OF TOWNSHIP LOT 112  
& PART OF ROAD ALLOWANCE  
BETWEEN TOWNSHIP LOTS 111 & 112  
(GEOGRAPHIC TOWNSHIP OF NIAGARA)  
IN THE  
TOWNSHIP OF NIAGARA-ON-THE-LAKE  
REGIONAL MUNICIPALITY OF NIAGARA**  
SCALE & NOTES  
Scale 1:300

BARICH GRENKIE SURVEYING LTD.  
A DIVISION OF GEOMAPLE  
© COPYRIGHT 2024

METRIC  
DISTANCES, ELEVATIONS AND CO-ORDINATES SHOWN ON THIS PLAN ARE IN METRES  
AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

ELEVATION NOTE  
ELEVATIONS ARE GEODETIC ORIGIN (CGVD-1928-78), AND ARE DERIVED FROM  
REAL TIME NETWORK (RTN) OBSERVATIONS AND NATURAL RESOURCES  
CANADA'S GEOD MODEL HT2.0

**BEARING NOTE**  
BEARINGS ARE UTM GRID, DERIVED FROM GPS OBSERVED REFERENCE POINTS  
A AND B, BY REAL TIME NETWORK (RTN) OBSERVATIONS, UTM ZONE 17 (81°  
00' WEST LONGITUDE) NAD83 (CSRS) (2011.0).

**HORIZONTAL DATUM NOTE**  
PROJECTION: UNIVERSAL TRANSVERSE MERCATOR  
(UTM, ZONE 17, CM 8100'W)

DATUM: NAD83 (CSRS) (2011.0)

**GRID SCALE CONVERSION**  
DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID DISTANCES BY  
MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999872.

OBSERVED REFERENCE POINTS (ORPs) DERIVED FROM GPS OBSERVATIONS USING REAL TIME NETWORK (RTN) OBSERVATIONS UTM COORDINATES TO URBAN ACCURACY PER SEC 14(2) OF O. REG. 215/10		
MONUMENT ID	NORTHING	EASTING
(A) IB	4786944.165	652484.398
(B) IB	4786733.649	652522.005

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS  
OR BOUNDARIES SHOWN ON THIS PLAN.

- LEGEND**
- DENOTES SURVEY MONUMENT FOUND
  - DENOTES SURVEY MONUMENT PLANTED
  - IB DENOTES IRON BAR
  - SIB DENOTES STANDARD IRON BAR
  - SSIB DENOTES SHORT STANDARD IRON BAR
  - OU DENOTES ORIGIN UNKNOWN
  - S39 DENOTES D. G. URE, O.L.S.
  - S67 DENOTES R. B. ERWIN, O.L.S.
  - 744 DENOTES R. J. MATTHEWS, O.L.S.
  - 1487 DENOTES J. P. NOUWENS, O.L.S.
  - JOB DENOTES J. D. BARNES, O.L.S.
  - P1 DENOTES PLAN BY J. D. BARNES LTD.  
DATED JULY 19, 2022  
SPECIAL PLAN 85
  - P2 DENOTES WAINCOTE
  - MH DENOTES CATCHBASIN
  - CB DENOTES LIGHT STANDARD
  - LS DENOTES TOP OF CURB ELEVATION
  - TC DENOTES GUTTER ELEVATION
  - QUT DENOTES OVERHEAD UTILITY CABLES
  - OH DENOTES DECIDUOUS TREE
  - DT DENOTES CONIFEROUS TREE
  - CT DENOTES UTILITY POLE
  - FF DENOTES FINISHED FLOOR ELEVATION
  - S39 DENOTES GARAGE FLOOR ELEVATION
  - QUT DENOTES CHAIN LINK FENCE
  - CLF DENOTES POST & WIRE FENCE
  - PWF DENOTES REMAINS OF POST & WIRE FENCE
  - GL DENOTES GASLINE
  - BRK DENOTES BRICK
  - DNFH DENOTES TOP NUT OF FIRE HYDRANT
  - CRW DENOTES CONCRETE RETAINING WALL

**REVISED NOTE**  
REVISED TO SHOW REMOVED BERM & CURBS ON EAST SIDE OF FOUR MILE CREEK ROAD  
& NEW DRUPLINE AS MARKED OUT

FEBRUARY 19, 2025

ERIC G. SALZER  
O.L.S., O.L.I.P.

**SURVEYOR'S CERTIFICATE**  
I CERTIFY THAT  
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS  
ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.  
2. THE SURVEY WAS COMPLETED ON JANUARY 25, 2024.

JANUARY 26, 2024

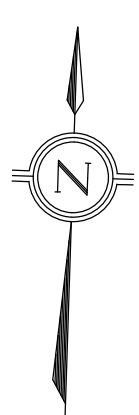
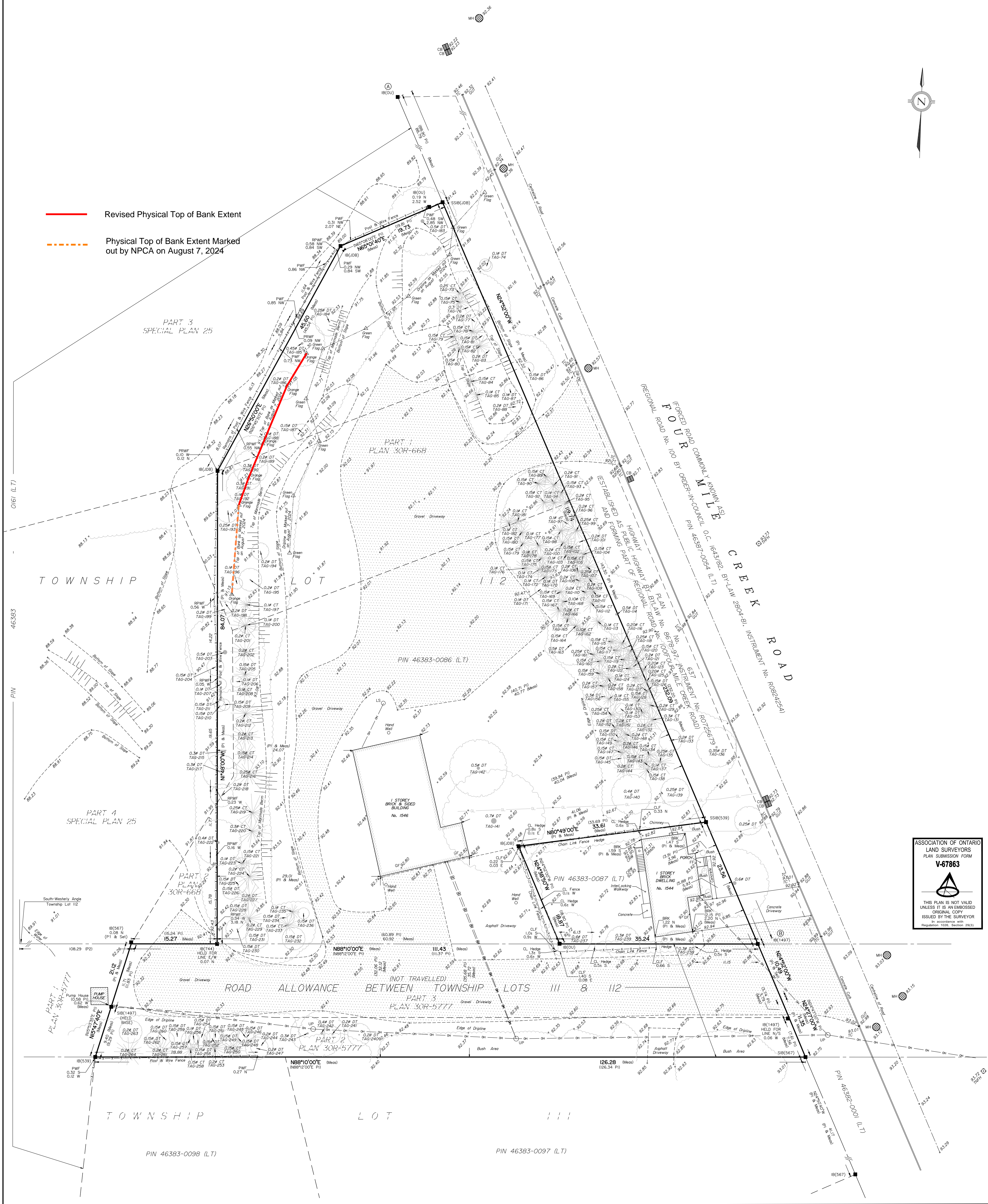
ERIC G. SALZER  
O.L.S., O.L.I.P.

**Barich Grenkie  
Surveying Ltd.**  
301 HWY No. 8 (2ND FLOOR) STONEY CREEK, ON  
L8G 1E8 (416) 662-6767

DWN BY: EGS  
CHK BY: EWA  
JOB NO. 23-3200

A DIVISION OF GEOMAPLE

THIS PLAN WAS PREPARED FOR REZEN HOLDING CORPORATION AND THE  
UNDERSIGNED ASSUMES NO RESPONSIBILITY FOR USE BY OTHER PARTIES.



— Revised Physical Top of Bank Extent  
- - - Physical Top of Bank Extent Marked out by NPCA on August 7, 2024

ASSOCIATION OF ONTARIO  
 LAND SURVEYORS  
 PLAN SUBMISSION FORM  
**V-67863**  
 THIS PLAN IS NOT VALID  
 UNLESS IT IS AN EMBOSSED  
 ORIGINAL COPY  
 ISSUED BY THE SURVEYOR  
In accordance with  
 Regulation 1526, Section 21(3)

**BEARING NOTE**  
 BEARINGS ARE UTM GRID, DERIVED FROM GPS OBSERVED REFERENCE POINTS A AND B, BY REAL TIME NETWORK (RTN) OBSERVATIONS, UTM ZONE 17 (81° 00' WEST LONGITUDE) NAD83 (CSRS) (2010.0).

**HORIZONTAL DATUM NOTE**  
 PROJECTION: UNIVERSAL TRANSVERSE MERCATOR (UTM, ZONE 17, CM 8100'W)

**GRID SCALE CONVERSION**  
 DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999872.

**ELEVATION NOTE**  
 ELEVATIONS ARE GEODETIC ORIGIN (CGVD-1928:78), AND ARE DERIVED FROM REAL TIME NETWORK (RTN) OBSERVATIONS AND NATURAL RESOURCES CANADA'S GEOD MODEL HT2.0

OBSERVED REFERENCE POINTS (ORPs) DERIVED FROM GPS OBSERVATIONS USING REAL TIME NETWORK (RTN) OBSERVATIONS UTM ZONE 17, NAD83 (CSRS)(2010.0). COORDINATES TO URBAN ACCURACY PER SEC 14(2) OF O.REG. 216/10

MONUMENT ID	NORTHING	EASTING
IB	4786944.166	652494.398
IB	4786733.649	652592.005

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

**LEGEND**

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT PLANTED
IB	DENOTES	IRON BAR
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
OJ	DENOTES	ORIGIN UNKNOWN
539	DENOTES	D. G. URE, O.L.S.
567	DENOTES	R. B. ERWIN, O.L.S.
744	DENOTES	R. J. MATTHEWS, O.L.S.
1497	DENOTES	J. P. NOUMENS, O.L.S.
JDB	DENOTES	J. D. BARNES, O.L.S.
P1	DENOTES	PLAN BY J. D. BARNES LTD. DATED JULY 19, 2022
P2	DENOTES	SPECIAL PLAN 85
MH	DENOTES	MANHOLE
CB	DENOTES	CATCHBASIN
LS	DENOTES	LIGHT STANDARD
TC	DENOTES	TOP OF CURB ELEVATION
GUT	DENOTES	GUTTER ELEVATION
OH	DENOTES	OVERHEAD UTILITY CABLES
DT	DENOTES	DECIDUOUS TREE
CT	DENOTES	CONIFEROUS TREE
UP	DENOTES	UTILITY POLE
FF	DENOTES	FINISHED FLOOR ELEVATION
GF	DENOTES	GARAGE FLOOR ELEVATION
CLF	DENOTES	CHAIN LINK FENCE
PWF	DENOTES	POST & WIRE FENCE
RPWF	DENOTES	REMAINS OF POST & WIRE FENCE
GL	DENOTES	GASLINE
BRK	DENOTES	BRICK
TNFH	DENOTES	TOP NUT OF FIRE HYDRANT
CRW	DENOTES	CONCRETE RETAINING WALL

**REVISED NOTE**  
 REVISED TO REVISE ELEVATIONS OF ORANGE FLAGS  
 AUGUST 20, 2024  
 ERIC G. SALZER  
 O.L.S., O.L.I.P.

**REVISED NOTE**  
 REVISED TO SHOW ELEVATIONS OF ORANGE FLAGS  
 AUGUST 16, 2024  
 ERIC G. SALZER  
 O.L.S., O.L.I.P.

**REVISED NOTE**  
 REVISED TO SHOW TREES WITH TAGS & FLAGS  
 AUGUST 14, 2024  
 ERIC G. SALZER  
 O.L.S., O.L.I.P.

**SURVEYOR'S CERTIFICATE**  
 I CERTIFY THAT  
 1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEY ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.  
 2. THE SURVEY WAS COMPLETED ON JANUARY 25, 2024  
 JANUARY 26, 2024  
 ERIC G. SALZER  
 O.L.S., O.L.I.P.

**PLAN OF SURVEY**  
 (WITH TOPOGRAPHIC DETAIL) OF  
**PART OF TOWNSHIP LOT 112**  
**& PART OF ROAD ALLOWANCE**  
**BETWEEN TOWNSHIP LOTS 111 & 112**  
 (GEOGRAPHIC TOWNSHIP OF NIAGARA)  
**IN THE**  
**TOWN OF NIAGARA-ON-THE-LAKE**  
**REGIONAL MUNICIPALITY OF NIAGARA**  
**SCALE & NOTES**  
 Scale 1:300

**BARICH GRENKIE SURVEYING LTD.**  
 A DIVISION OF GEOMAPLE  
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**METRIC**  
 DISTANCES, ELEVATIONS AND CO-ORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

**ELEVATION NOTE**  
 ELEVATIONS ARE GEODETIC ORIGIN (CGVD-1928:78), AND ARE DERIVED FROM REAL TIME NETWORK (RTN) OBSERVATIONS AND NATURAL RESOURCES CANADA'S GEOD MODEL HT2.0

THIS PLAN WAS PREPARED FOR REZEN HOLDING CORPORATION AND THE UNDERSIGNED ASSUMES NO RESPONSIBILITY FOR USE BY OTHER PARTIES.

**REVISED NOTE**  
 CONNECT FLAGS  
 AUGUST 22, 2024  
 ERIC G. SALZER  
 O.L.S., O.L.I.P.

**Barich Grenkie**  
**Surveying Ltd.**  
 301 HWY No. 8 (2ND FLOOR) - STONEY CREEK, ON  
 L8G 1E5 (416) 662-6767  
 A DIVISION OF GEOMAPLE

DWN BY: EGS  
 CHK BY: EWA  
 JOB No. 23-3200

EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Appendix C – Qualification of Assessors

## Qualifications of Assessors

### **Amanda Catenaro, M.E.Sc., P.Geo., QPESA (Senior Project Manager)**

Amanda Catenaro graduated from McMaster University in 2012 with a Bachelor of Science degree in Environmental Science, specialized in Hydrogeology and Climatology. She completed her Master of Environmental Science Degree from the University of Toronto in 2013. Ms. Catenaro has worked on a number of Phase One and Two environmental site assessments, delineation programs, ex-situ and in-situ remediation projects, and peer reviews since joining EXP Services Inc. in 2013.

Ms. Catenaro has international experience working on environmental projects in the United Kingdom and United States of America, including undertaking desk studies, risk assessments, and remediation projects (strategy development, design, implementation and validation). She has closed-out projects in a variety of specialized sectors such as transportation, highway, rail, and water schemes.

Ms. Catenaro is a Professional Geologist (P.Geo.) in Ontario and is a Qualified Person (QP) for environmental site assessments under Ontario Regulation 153/04.

### **Kate Miles, P.Eng. (Senior Environmental Scientist)**

Kate Miles graduated from Queen's University with a Bachelor of Science in Chemical Engineering in 2010, and from Ryerson University's Chang School of Continuing Education with a certificate in Environmental Engineering Science in 2014. She has over nine years of experience in environmental consulting. She is a licensed professional engineer in Ontario.

### **Jaimesyn Patterson (Environmental Scientist)**

Jaimesyn Patterson graduated from Queen's University with an Honours Degree in Biology. Since joining EXP in March 2024, her fieldwork experiences have included overseeing the drilling of boreholes and installation of monitoring wells, groundwater network monitoring, conducting Phase One and Phase Two Environmental Site Assessments (in accordance with the applicable CSA Standards and O.Reg. 153/04), and aiding in project reporting efforts.

**EXP Services Inc.** is a full-service consulting and engineering firm and provides a full range of environmental services through the Environmental Services Group. EXP's Environmental Services Group has developed a strong working relationship with clients in both the private and public sectors and has developed a positive relationship with the Ontario Ministry of the Environment. Personnel in the numerous branch offices form part of a large network of full-time dedicated environmental professionals in the EXP organization.

EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Appendix D – Sampling and Analysis Plan



## Memorandum

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Date: September 23, 2024  
To: \_\_\_\_\_  
From: Amanda Catenaro  
CC: \_\_\_\_\_

**RE: Environmental Phase Two ESA  
1544 & 1546 Four Mile Creek Rd, Niagara-on-the-Lake, Ontario**

**Project Number: GTR-24000672-C0-2  
Date(s) of Field Work: Drilling – September 24, 2024**

**Site Address: 1544 & 1546 Four Mile Creek Rd, Niagara-on-the-Lake, Ontario  
PM Contact: Amanda Catenaro, (647) 937-7008  
Laboratory: AGAT, Travis Judd, 905-712-5130**

### **PROJECT OBJECTIVES:**

The purpose of this Supplemental drilling investigation is to:

- Investigate areas of potential environmental concern (APECs) identified by the ongoing Phase One investigation.
- Complete soil and groundwater sampling for petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals and inorganics at three (3) of the boreholes being advanced as part of the combined geotechnical/hydrogeological/environmental investigations

EXP Services Inc. (EXP) will carry out a soil and groundwater sampling program at the site. The drilling company has been retained for the drilling work, including the advancement of a total of eight (8) boreholes, only three (3) of which will be used for environmental purposes.

Groundwater monitors will be installed at three (3) of the boreholes (BH2, BH3, BH4).

### **Soil Sampling**

- All environmental sampling on this site should be completed as indicated in Table 1.
- Soil samples will be collected from clean split spoon samplers or lined dual tube samplers. The soil samples will be inspected for visual and olfactory evidence of chemical impact and for geological composition. The findings will be recorded in a log. Vapour readings in the soil will be measured using an RKI Eagle 2 portable hydrocarbon surveyor or equivalent.

- Soil samples will be collected as set out in Table 1. For soil samples placed in methanol vials, please ensure that they are accompanied by a jar of soil for **moisture content** analysis, if they are not accompanied by a jar for another parameter (i.e. PHCs).

**Table 1: Soil Sampling Summary**

Borehole ID	Approximate Depth of Soil Sample*	Sampling Rationale	Parameters	Well install
<b>BH1</b>	<b>Metals and Inorganics/PAHs/PCBs</b> - worse case (0-1.5m)  Submit deeper delineation sample from about 4-5m on HOLD	Assess fill of unknown quality	PHCs, VOCs, PAHs, PCBs, Metals and Inorganics	<b>No well installation</b>
	<b>PHCs/VOCs</b> –0 -1.5m  Submit deeper delineation sample from about 4-5m on HOLD			
<b>BH2</b>	<b>Metals and Inorganics/PAHs/OC pesticides</b> - worse case (0-1.5m)  Submit deeper delineation sample from about 3-4m on HOLD	Assess former orchard/vineyard, horizontally delineate historical PHC exceedances at BH1-23	PHCs, PAHs, VOCs, OC Pesticides, Metals and Inorganics	<b>No well installation</b>
	<b>PHCs/VOCs</b> – 1.5-2.0 m <b>PHCs/VOCs</b> – worst case or at water table (expected at 6m)	horizontally delineate historical PHC exceedances at BH1-23		
<b>BH3</b>	<b>Metals and Inorganics/PAHs/OC pesticides</b> - worse case (0-1.5m)  Submit deeper delineation sample from about 3-4m on HOLD	Assess former orchard/vineyard, location of vent/fill pipes	PHCs, PAHs, VOCs, OC Pesticides, Metals and Inorganics	Install well for groundwater (estimated screen 5 to 8 mbgs or 2m below observed water table)
	<b>PHCs/VOCs</b> – 1.5-2.0 m <b>PHCs/VOCs</b> – worst case or at water table (expected at 6m)  Submit deeper delineation sample	Assess location of vent/fill pipes		

## Drilling and Groundwater Sampling

1544 &amp; 1546 Four Mile Creek Rd, Niagara-on-the-Lake, Ontario

Borehole ID	Approximate Depth of Soil Sample*	Sampling Rationale	Parameters	Well install
	from about 8m or deeper on HOLD			
BH4	<p><b>Metals and Inorganics/PAHs/OC pesticides</b> - worse case (0-1.5m)</p> <p><b>PHCs/VOCs</b> – 1.5-2.0m</p> <p><b>PHCs/VOCs</b> – worst case or at water table (expected at 6m)</p> <p>Submit deeper delineation sample from about 8m or deeper on HOLD</p>	Assess former orchard/vineyard, former USTs, horizontally delineate historical PHC exceedances at BH1-23, assess marine and equipment repair shop	PHCs, PAHs, VOCs, OC Pesticides, Metals and Inorganics	Install well for groundwater (estimated screen 5 to 8 mbgs or 2m below observed water table)
	<p><b>PHCs/VOCs</b> – 1.5-2.0m</p> <p><b>PHCs/VOCs</b> – worst case or at water table (expected at 6m)</p> <p>Submit deeper delineation sample from about 8m or deeper on HOLD</p>			
BH5	<p><b>Metals and Inorganics/PAHs/PCBs</b> - worse case (0-1.5m)</p> <p>Submit deeper delineation sample from about 4-5m on HOLD</p> <p><b>PHCs/VOCs</b> –0 -1.5m</p> <p>Submit deeper delineation sample from about 4-5m on HOLD</p>	Assess fill of unknown quality	PHCs, VOCs, PAHs, PCBs, Metals and Inorganics	<b>No well installation</b>
	<p><b>PHCs/VOCs</b> –0 -1.5m</p> <p>Submit deeper delineation sample from about 4-5m on HOLD</p>			
BH7	<p><b>Metals and Inorganics/PAHs/OC pesticides</b> - worse case (0-1.5m)</p>	Assess former orchard/vineyard, repair shop, horizontally delineate historical PHC exceedances at BH1-23, assess marine and equipment repair shop	PHCs, PAHs, VOCs, OC Pesticides, Metals and Inorganics	Install well for groundwater (estimated screen 5 to 8 mbgs or 2m below observed water table)
	<p><b>PHCs/VOCs</b> – 1.5-2.0m</p> <p><b>PHCs/VOCs</b> – worst case or at water table (expected at 6m)</p> <p>Submit deeper delineation sample from about 8m or deeper on HOLD</p>			

\*Guidance on sampling depths:

**Drilling and Groundwater Sampling****1544 & 1546 Four Mile Creek Rd, Niagara-on-the-Lake, Ontario**

- Collect one (1) field duplicate soil sample per ten (10) samples for each parameter, to be submitted to the laboratory for quality assurance/quality control (QA/QC) purposes.
- Monitors will be constructed as 2" monitors with a PVC screen interval no longer than 3.1 metres (10 feet) as specified by O. Reg. 153/04, and capped at the base of the monitor. The monitor will be backfilled with sand to an elevation of 0.3 to 0.6 metres (1 to 2 feet) above the top of the screened interval. The monitor will be sealed with bentonite to surface, capped with a locked j-plug and finished with a flush mount casing set in concrete. Please record monitor installation details including riser pipe length, screen interval slot size (e.g. 0.01-inch slot size, 2 TPI), diameter of annulus and depth to top of sand pack.
- Develop the newly installed groundwater monitoring wells as they are installed, to ensure that they can be sampled concurrent with the drilling program.
- Soil cuttings will be segregated on-site for future disposal, if required. In the event that the need to identify soil cuttings is identified, please contact the PM prior to proceeding.
- Sample pick-ups will be organized for the site on an as-needed basis, based on the progress of drilling. Please discuss with the PM to ensure that sample pick-ups are scheduled as required.
- Soil samples should be submitted on regular turn-around time. Please ensure soil samples are properly preserved with ice in a storage cooler maintained below 10°C

**Groundwater Sampling**

- Groundwater samples will be collected from the 3 newly installed monitor (BH3, BH4 and BH7) and 3 pre-existing wells (BH1-23, BH2-23 and BH5-23). Monitoring wells will be properly developed by purging to representative aquifer conditions. 6 groundwater samples will be retrieved from the newly installed monitoring wells and pre-existing wells using low flow techniques, with either a peristaltic pump or bladder pump. Use proper sampling techniques to avoid introducing contaminants into the groundwater sample. Use proper decontamination techniques between monitors.
- If no obvious impacts are noted, purged water can be disposed onto a paved area of the site away from any catch basins.
- Groundwater samples will be collected from the groundwater monitoring wells using new clean tubing. Collected groundwater samples will be submitted to AGAT for analysis of PHCs, VOCs, Metals and Inorganics, and PAHs.
- Collect one (1) field duplicate groundwater sample per ten (10) samples for each parameter, to be submitted to the laboratory for QA/QC purposes. **A trip blank should be submitted with each submission of groundwater samples to the laboratory and analyzed for F1/VOCs.**
- Please communicate with the PM to arrange the sample pickup details for the groundwater samples. Groundwater samples should be submitted on a **regular** turn-around time. Please ensure samples are properly preserved with ice in a storage cooler maintained below 10°C.

**Table 2: Groundwater Sampling Summary**

Monitor ID	Screen Interval (mbgs)	Purpose	Parameters
BH3	4.57 - 7.62	Investigation of former orchard/vineyard.	PHCs, VOCs, Metals and Inorganics, PAHs
BH4	0.91 - 3.96	Investigation of former USTs.	PHCs, VOCs, Metals and Inorganics, PAHs
BH7	4.57 - 7.62	Investigation of marine and equipment repair shop.	PHCs, VOCs, Metals and Inorganics, PAHs
BH1-23	2.14 - 5.18	Investigation of former USTs.	PHCs, VOCs, Metals and Inorganics, PAHs
BH2-23	4.43 - 7.47	Investigation of marine and equipment repair shop.	PHCs, VOCs, Metals and Inorganics, PAHs
BH5-23	3.67-6.71	Investigation of marine and equipment repair shop.	PHCs, VOCs, Metals and Inorganics, PAHs

Notes:

\*These are estimates only, actual depth will depend on drilling. Well to be installed about 2m below observed water table.

**Chain of Custody Information**

- Project number GTR-24000672-C0-2 for soil and groundwater samples, Table 1 RPI medium/fine Standards.
- Soil analyses: PHC fractions F1 to F4, VOCs, PAHs, metals and inorganics, OC pesticides, PCBs
- Soil QA/QC: field duplicate samples (Remember to have at least one (1) per ten (10) samples for each parameter group)
- Groundwater Analyses: PHC fractions F1 to F4, VOCs, PAHs, metals and inorganics
- Groundwater QA/QC: field duplicate samples (Remember to have at least one (1) field duplicate sample per ten (10) samples for each parameter group), F1/VOC trip blank with each submission

Submit results to amanda.catenaro@exp.com

**References**

- EXP SOP, *Decontamination, Version 2.0*, rev. 2017
- EXP SOP, *Field Screening, Version 2.0*, rev. 2017
- EXP SOP, *Field QA/QC Programs, Version 2.0*, rev. 2012
- EXP SOP, *Monitor Installation, Version 2.0*, rev. 2017
- EXP SOP, *Monitor Development, Version 2.0*, rev. 2017
- EXP SOP, *Monitor and Groundwater Sampling, Version 2.0*, rev. 2017
- EXP SOP, *Soil Descriptions, Version 2.0*, rev. 2017
- EXP SOP, *Subsurface Soil Sampling, Version 2.0*, rev. 2017
- EXP SOP, *Test Hole Assessment, Version 2.0*, rev. 2017
- EXP SOP, *Test Hole Procedure, Version 2.0*, rev. 201



## Memorandum

Date: April 25, 2025  
To: Scott Grant-Hose  
From: Amanda Catenaro  
CC: Jaime Patterson

**RE: Soil Remediation and Confirmatory Soil Sampling; and pH Sampling  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake**

**Project Number:** GTR-2400672-B0  
**Date(s) of Field Work:** Soil Remediation and Confirmatory Sampling; and pH Sampling  
April 28 - 29, 2025 (Expected to be one day but may go into a second)  
**Site Address:** 1544 & 1546 Four Mile Creek Rd, Niagara-on-the-Lake, Ontario  
**Client:** Stephen Aghaei  
Times Group Corp.  
**Excavator/Subcontractor:** Michael Brothers  
**PM Contact:** Amanda Catenaro, (647) 937-7008  
**Laboratory:** AGAT, Travis Judd, 905-712-5130

### PROJECT OBJECTIVES:

The objectives of the investigation include the following:

1. pH sampling
2. PHC Soil Remediation and Confirmatory Sampling

It is understood that the excavator, obtained by the Client will be responsible for requesting and maintaining public and private utility locates during the excavation activities. The excavation contractor will be retained directly by the Client. EXP will not request public, nor private utility locates and will not accept any liability for any damage to underground services.

### 1. pH sampling

- Collect additional pH samples at two (2) locations with previous pH exceedances (BH1 and BH5).

A pH (surficial) outside of the range of 5-9 was identified in samples BH5-SS1 (depth of 0.0 to 0.61 mbgs) and BH1-SS1 (depth of 0.0 to 0.61 mbgs). In order to apply Table 9 Standards to the Site and avoid defaulting to Table 1 Standards, the current elevated pH values at BH1 and BH5 must be re-evaluated.

### SCOPE OF WORK:

- Collect three (3) surficial soil samples for pH in the vicinity of borehole locations BH1 and BH5, for a total of six (6) pH samples.

**Soil Remediation and Confirmatory Soil Sampling  
1544 & 1546 Four Mile Creek Road, Niagara on the Lake, Ontario**

- Samples should be obtained from native material, expected to be under a layer of fill. Please do not include fill material in the sample selection.
- Use the excavator to complete this work if available. If not, please use a hand auger or shovel to obtain the sample.

**Refer to Table 1 for a summary of soil samples required.**

**The approximate location of the pH samples are shown in the attached Site plan.**

## 2. Soil Remediation and Confirmatory Sampling

- Remedial Excavation
- Confirmatory Soil Sampling.

PHC impacted soil was previously identified at borehole **BH1-2023** and **BH4**. It is anticipated to encompass an area of **100 m<sup>2</sup>** and include approximately **300 m<sup>3</sup>** of contaminated soil in the vicinity of the former UST. These extents will be confirmed during the remediation excavation. The remediation program will act as both a delineation program and confirmatory soil sampling for this area of contamination.

Please note that BH1-2023 and BH4 should be decommissioned prior to remediation activities. **However, this is the responsibility of the subcontractor, retained by the Client.**

EXP will direct the excavation, movement and segregation of impacted soil. The excavation contractor will document and maintain records of the soil removal and haulage. Upon completion of the remedial excavation, confirmatory sampling will be conducted to confirm that the soil impacts have been fully remediated.

### SCOPE OF WORK:

- Observe the activities of a licensed contractor in the excavation of PHC impacted soil in the vicinity of the former UST (near BH1-2023 and BH4). The Client has procured the excavator, they are not contracted under EXP.
- Identify and remediate the extent of PHC contamination previously identified in the vicinity of BH1-2023, BH4 and the historic UST.
- Assess soil quality as the excavation proceeds to find the clean boundaries.
- Take confirmatory soil samples for PHC fractions F1 to F4 from the floor and walls of the final excavation (once clean boundaries are identified). The selection of the samples will be based on a “worst case” via field observations/screening.
- The number of confirmatory soil samples will vary depending on the size of the excavation, the sampling frequency will be in accordance with Table 3 in Ontario Regulation (O. Reg.) 153/04 (referenced below);
  - It is anticipated that a total of four (4) floor samples and six (6) wall samples will be collected for PHC analysis from the remedial excavation. The extent of PHC contamination is currently unknown and will be delineated as part of the remediation activities. Therefore, the sampling frequency may be updated accordingly, in this case please refer to Table 3.
  - One field duplicate sample will be submitted for every ten soil samples analyzed.
- Please take lots of photos of the excavation, provide sketches including measurements, and note sampling locations.

**Refer to Table 1 for a summary of soil samples required.**

**The approximate location of the excavation in the area of the former UST is shown in the attached site plan.**

If the excavation is extended significantly for any reason, please refer to the table below on how many samples are required.

**TABLE 3**  
**Minimum Confirmation Sampling Requirements for Excavation**

Floor Area (m <sup>2</sup> )	Floor Samples	Sidewall Samples - should not all be taken from the same wall, and should represent worst-case
<25	2	2
>25-50	2	3
>50-100	3	3
>100-250	3	5
>250-500	4	6
>500-750	4	7
>750-1000	5	8

Field duplicate soil samples will be submitted for QA/QC purposes at a frequency of 1 duplicate per soil sample per block. A regular turn-around time (4 to 5 business days) will be requested for all laboratory analyses.

**Confirmatory Soil Sampling**

- Confirmatory soil samples will be collected from the sidewalls and floor of the final “clean” excavation. The number of soil samples will vary depending on the size of the excavation. The soil samples will be inspected for visual and olfactory evidence of chemical impact and for geological composition.
- Instead of a borehole log, please look at the profile of the soil and note what depth each soil type extends to in your notes.
- Vapour readings in the soil will be measured using an RKI Eagle 2 portable hydrocarbon surveyor or equivalent. The selection of the samples will be based on a “worst case” via field observations/screening. Try to take extend the excavation/soil removal to where you are getting RKI readings of 15 or lower ppm.
- It is anticipated that four (4) floor samples, six (6) sidewall samples and one (1) field duplicate sample from the excavation will be collected for chemical analysis of Petroleum Hydrocarbons (PHCs) Fractions 1 to 4 (F1-F4).
- In the event that impacted soil requires off-Site disposal, a representative soil sample should be collected and submitted for Toxicity Characteristic Leaching Procedure (TCLP) in accordance with Ontario Regulation 558. Please ask your PM before sending this, as it may depend on where the final placement of the excavated soil goes.

**Table 1: Soil Sampling Summary**

Anticipated Samples*	Approximate Depth of Soil Sample**	Sampling Rationale	Parameters
<b>3 pH samples at BH1 (a, b, c)</b>	0.0 to 0.61 mbgs <b>*in native material if possible</b>	Averaging	pH
<b>3 pH samples at BH5 (a, b, c)</b>	0.0 to 0.61 mbgs <b>*in native material if possible</b>	Averaging	pH
<b>Floor samples (estimate 4 but based on final area)</b>	<b>PHCs</b>	Confirmatory	PHCs
	<b>PHCs</b>		

Anticipated Samples*	Approximate Depth of Soil Sample**	Sampling Rationale	Parameters
of excavation, see Table 3 above)	PHCs		
	PHCs		
Sidewall (estimated 6 but based on final area of excavation, see Table 3 above)	PHCs	Confirmatory	PHCs
	PHCs		
	PHCs		
	PHCs		
	PHCs		
	PHCs		

\*The number of confirmatory soil samples will vary depending on the size of the excavation

\*\*please record depths and locations of samples on excavation drawing.

### General

- Collect one (1) field duplicate soil sample per ten (10) samples for each parameter, to be submitted to the laboratory for quality assurance/quality control (QA/QC) purposes.
- Soil cuttings will be disposed of off-site, as per the direction of the excavator. They are responsible for securing a reuse site or dump for the soil.
- Sample pick-ups will be organized for the site on an as-needed basis, based on the progress of excavation. Please discuss with the PM to ensure that sample pick-ups are scheduled as required. Or please return the samples for office pick up after the completion of the excavation.
- Soil samples should be submitted on regular turn-around time. Please ensure soil samples are properly preserved with ice in a storage cooler maintained below 10°C

### Reminders

- Please ensure that the HASP paperwork is completed prior to on-site activities. All subcontractors should sign-off on this paperwork.
- Always wear hard hat, visi-vest and use pylons as needed. Discuss scope of work with any other contractors on-site, prior to the commencement of field work.
- Call or message PM after the completion of the excavation, and before leaving the site for the day.
- Provide an excavation drawing with excavation depths, and confirmatory sample locations.
- Take photographs of the excavation during the investigation.
- Document any near miss incidents.

### Chain of Custody Information

- Project number GTR-24000672-B0-1 for soil samples, Table 1 SCS (non-potable, soil texture = medium fine).
- Soil analyses: PHC fractions F1 to F4, pH
- Soil QA/QC: field duplicate samples (Remember to have at least one (1) per ten (10) samples for each parameter group), pH does not require a duplicate
- Soil samples will be submitted on a regular (5-7 days) turn-around time.

Submit results to [amanda.catenaro@exp.com](mailto:amanda.catenaro@exp.com) and [Jaimesyn.patterson@exp.com](mailto:Jaimesyn.patterson@exp.com)

**References**

- EXP SOP, *Decontamination, Version 2.0*, rev. 2017
- EXP SOP, *Field Screening, Version 2.0*, rev. 2017
- EXP SOP, *Field QA/QC Programs, Version 2.0*, rev. 2012
- EXP SOP, *Monitor Installation, Version 2.0*, rev. 2017
- EXP SOP, *Monitor Development, Version 2.0*, rev. 2017
- EXP SOP, *Monitor and Groundwater Sampling, Version 2.0*, rev. 2017
- EXP SOP, *Soil Descriptions, Version 2.0*, rev. 2017
- EXP SOP, *Subsurface Soil Sampling, Version 2.0*, rev. 2017
- EXP SOP, *Test Hole Assessment, Version 2.0*, rev. 2017
- EXP SOP, *Test Hole Procedure, Version 2.0*, rev. 201

EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Appendix E – Borehole Logs

# Log of Borehole BH-1

Project No. HAM-24000672-A0

Drawing No. 3

Project: Proposed Mixed-Use Development

Sheet No. 1 of 1

Location: 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

Date Drilled: September 25, 2024

Auger Sample



Combustible Vapour Reading



SPT (N) Value



Natural Moisture



Drill Type: D-50 Track Mount. Solid Stem.

Dynamic Cone Test



Plastic and Liquid Limit



Datum: Geodetic

Shelby Tube



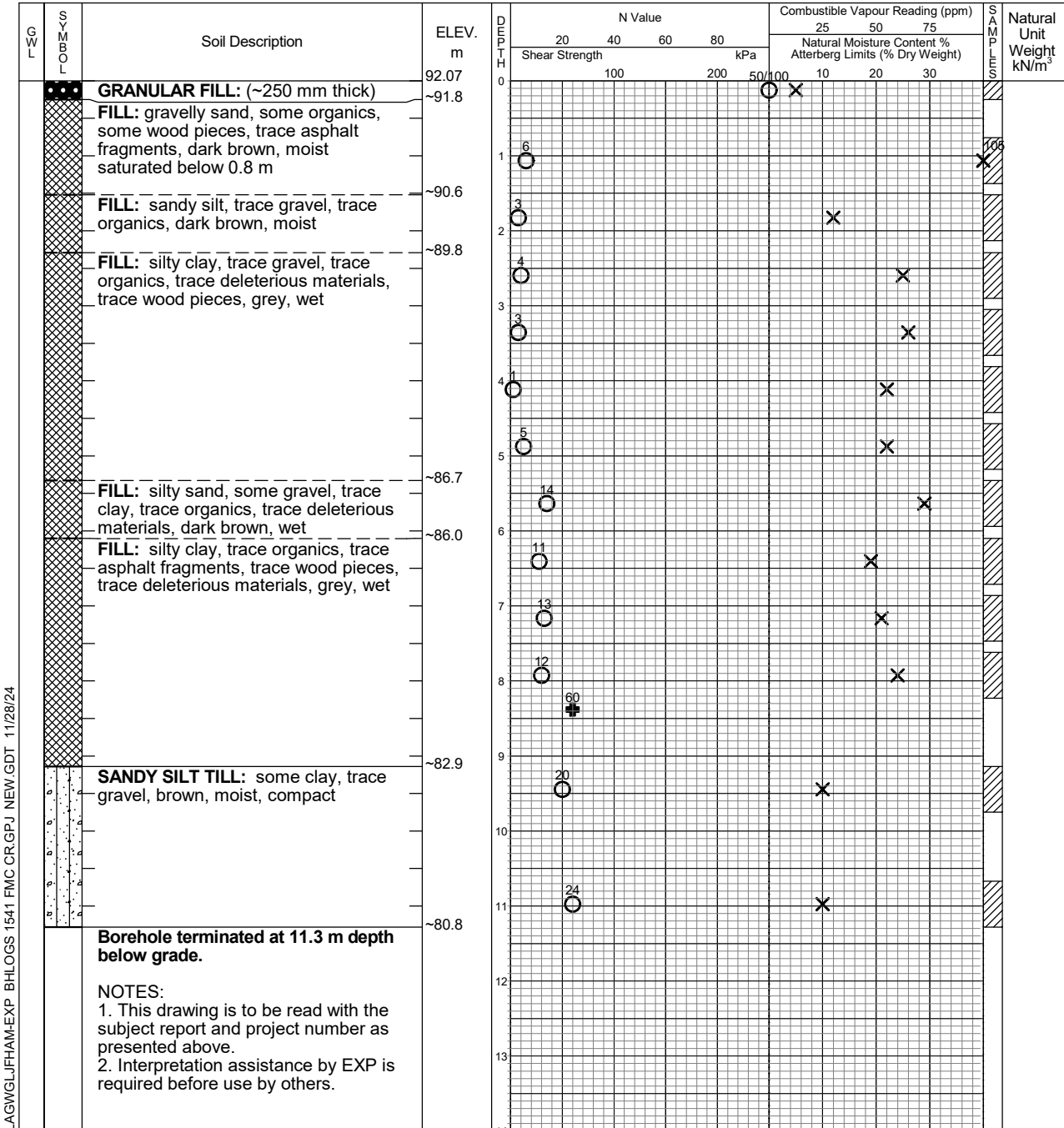
Undrained Triaxial at % Strain at Failure



Field Vane Test



Penetrometer



LAGWGLJFHAM-EXP\_BHLOGS:1541 FMC CR.GPJ NEW.GDT 11/28/24



EXP Services Inc.  
 Hamilton, Ontario  
 Telephone: 905.573.4000  
 Facsimile: 905.573.9693

Time	Water Level (m)	Depth to Cave (m)
on completion	7.6	7.3

# Log of Borehole BH-2

Project No. HAM-24000672-A0

Drawing No. 4

Project: Proposed Mixed-Use Development

Sheet No. 1 of 1

Location: 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

Date Drilled: September 24, 2024

Auger Sample

Combustible Vapour Reading

SPT (N) Value

Natural Moisture

Drill Type: D-50 Track Mount. Solid Stem.

Dynamic Cone Test

Plastic and Liquid Limit

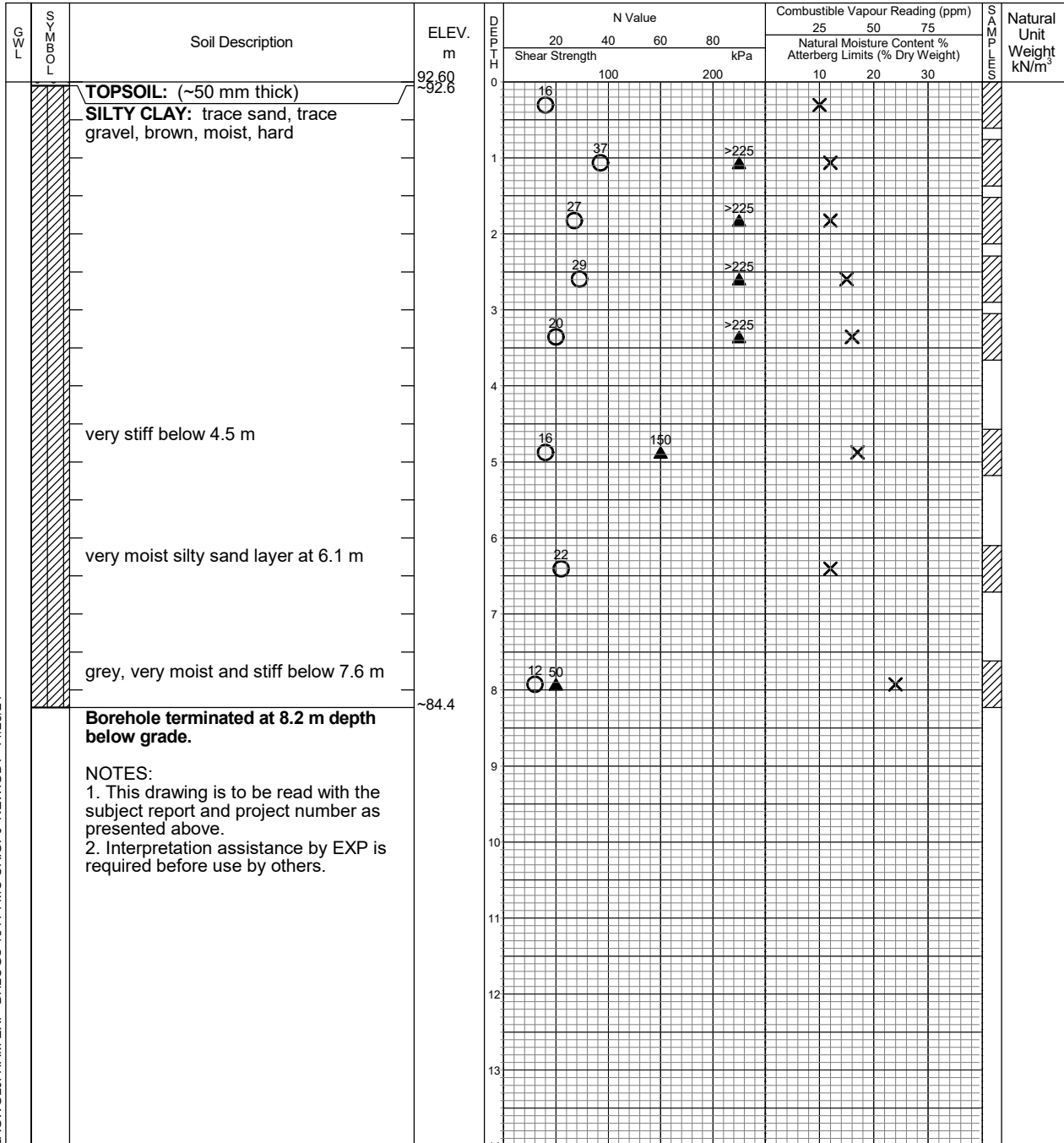
Datum: Geodetic

Shelby Tube

Undrained Triaxial at % Strain at Failure

Field Vane Test

Penetrometer



LAGWGLJFHAM-EXP\_BHLOGS 1541 FMC CR.GPJ NEW.GDT 11/28/24



EXP Services Inc.  
Hamilton, Ontario  
Telephone: 905.573.4000  
Facsimile: 905.573.9693

Time	Water Level (m)	Depth to Cave (m)
on completion	dry	open

# Log of Borehole BH-3

Project No. HAM-24000672-A0

Drawing No. 5

Project: Proposed Mixed-Use Development

Sheet No. 1 of 1

Location: 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

Date Drilled: September 26, 2024

Auger Sample



Combustible Vapour Reading



SPT (N) Value



Natural Moisture



Drill Type: D-50 Track Mount. Solid Stem.

Dynamic Cone Test



Plastic and Liquid Limit



Datum: Geodetic

Shelby Tube



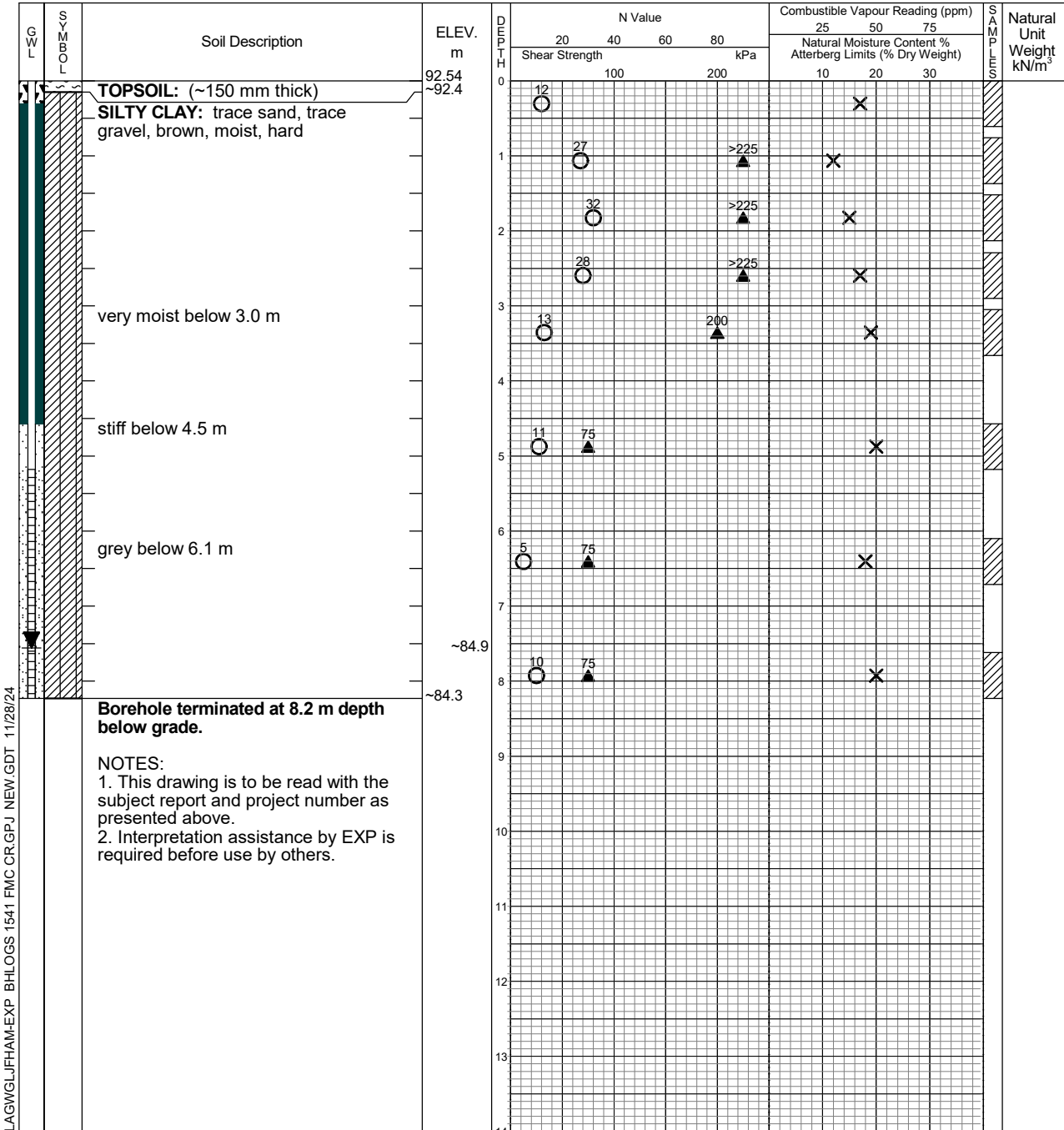
Undrained Triaxial at



Field Vane Test



Penetrometer



EXP Services Inc.  
 Hamilton, Ontario  
 Telephone: 905.573.4000  
 Facsimile: 905.573.9693

Time	Water Level (m)	Depth to Cave (m)
on completion October 24, 2024	dry 7.6	open -

# Log of Borehole BH-4

Project No. HAM-24000672-A0

Drawing No. 6

Project: Proposed Mixed-Use Development

Sheet No. 1 of 1

Location: 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

Date Drilled: September 24, 2024

Auger Sample



Combustible Vapour Reading



SPT (N) Value



Natural Moisture



Drill Type: D-50 Track Mount. Solid Stem.

Dynamic Cone Test



Plastic and Liquid Limit



Datum: Geodetic

Shelby Tube



Undrained Triaxial at



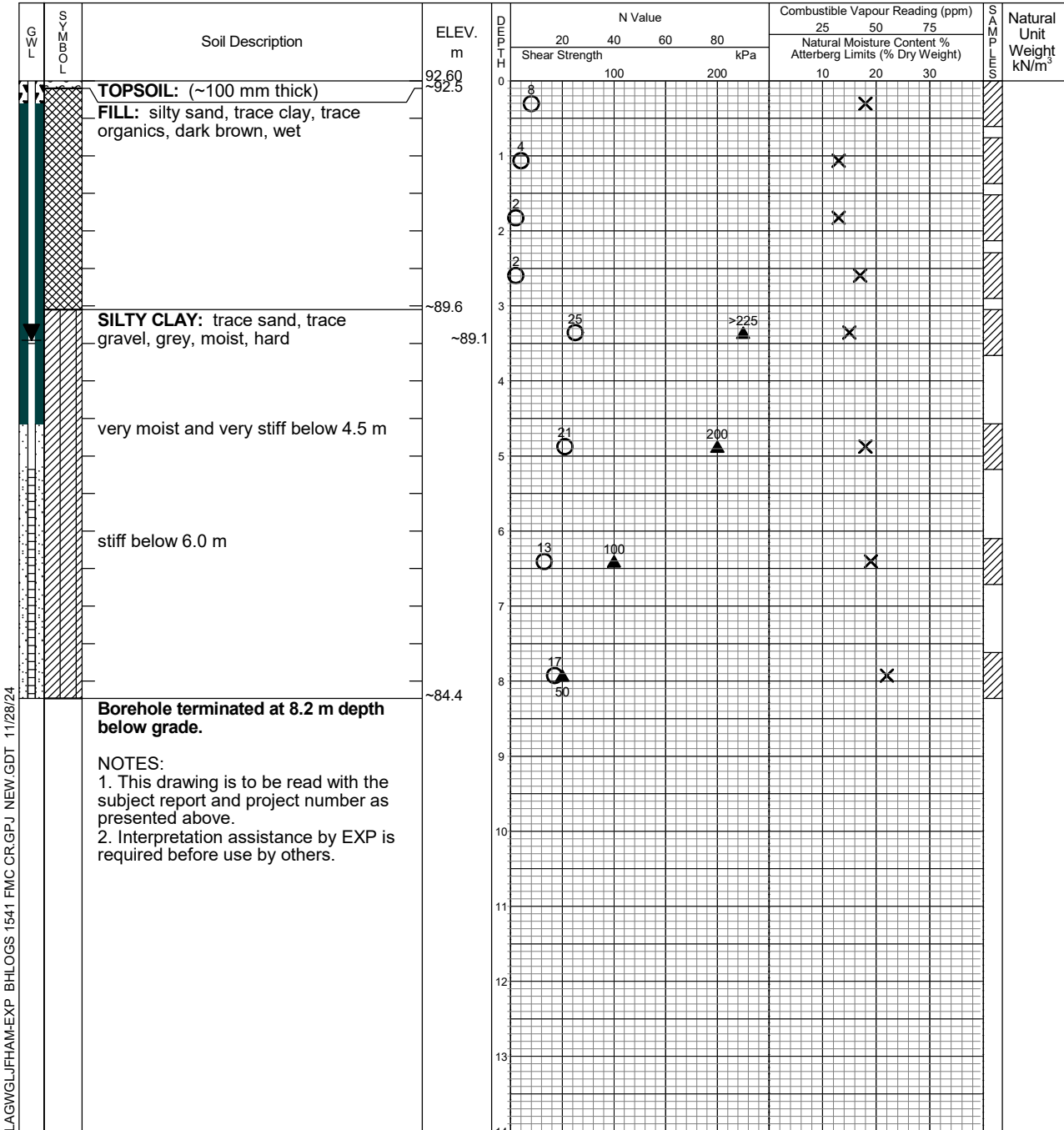
Field Vane Test



% Strain at Failure



Penetrometer



EXP Services Inc.  
 Hamilton, Ontario  
 Telephone: 905.573.4000  
 Facsimile: 905.573.9693

Time	Water Level (m)	Depth to Cave (m)
on completion	dry	1.2
October 24, 2024	3.5	-

# Log of Borehole BH-5

Project No. HAM-24000672-A0

Drawing No. 7

Project: Proposed Mixed-Use Development

Sheet No. 1 of 1

Location: 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

Date Drilled: September 25, 2024

Auger Sample



Combustible Vapour Reading



SPT (N) Value



Natural Moisture



Drill Type: D-50 Track Mount. Solid Stem.

Dynamic Cone Test



Plastic and Liquid Limit



Datum: Geodetic

Shelby Tube



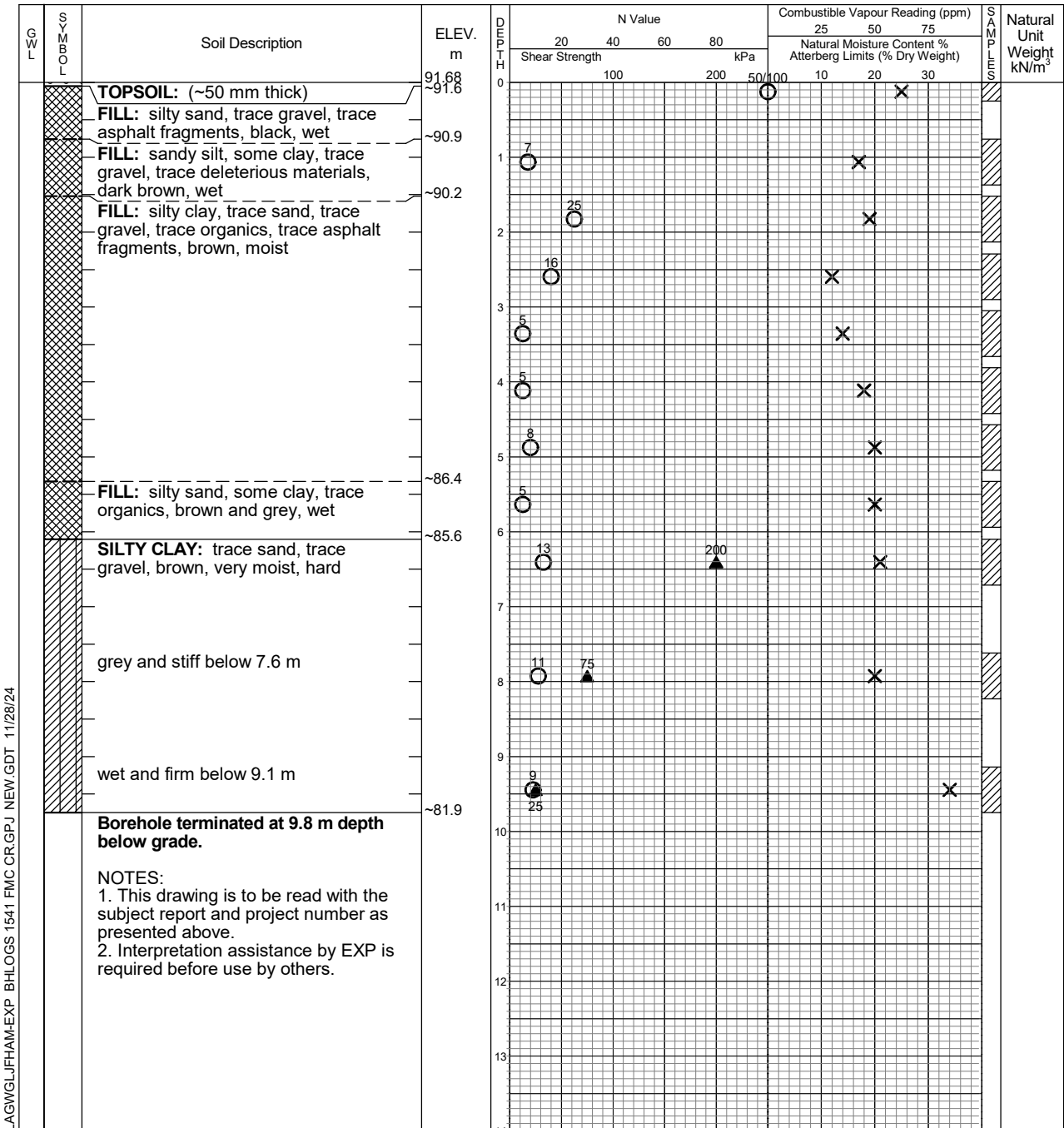
Undrained Triaxial at % Strain at Failure



Field Vane Test



Penetrometer



LAGWGLJFHAM-EXP\_BHLOGS 1541 FMC CR.GPJ NEW.GDT 11/28/24

**Borehole terminated at 9.8 m depth below grade.**

NOTES:  
 1. This drawing is to be read with the subject report and project number as presented above.  
 2. Interpretation assistance by EXP is required before use by others.



EXP Services Inc.  
 Hamilton, Ontario  
 Telephone: 905.573.4000  
 Facsimile: 905.573.9693

Time	Water Level (m)	Depth to Cave (m)
on completion	6.1	6.7

# Log of Borehole BH-6

Project No. HAM-24000672-A0

Drawing No. 8

Project: Proposed Mixed-Use Development

Sheet No. 1 of 1

Location: 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

Date Drilled: September 25, 2024

Auger Sample

Combustible Vapour Reading

Drill Type: D-50 Track Mount. Solid Stem.

SPT (N) Value

Natural Moisture

Datum: Geodetic

Dynamic Cone Test

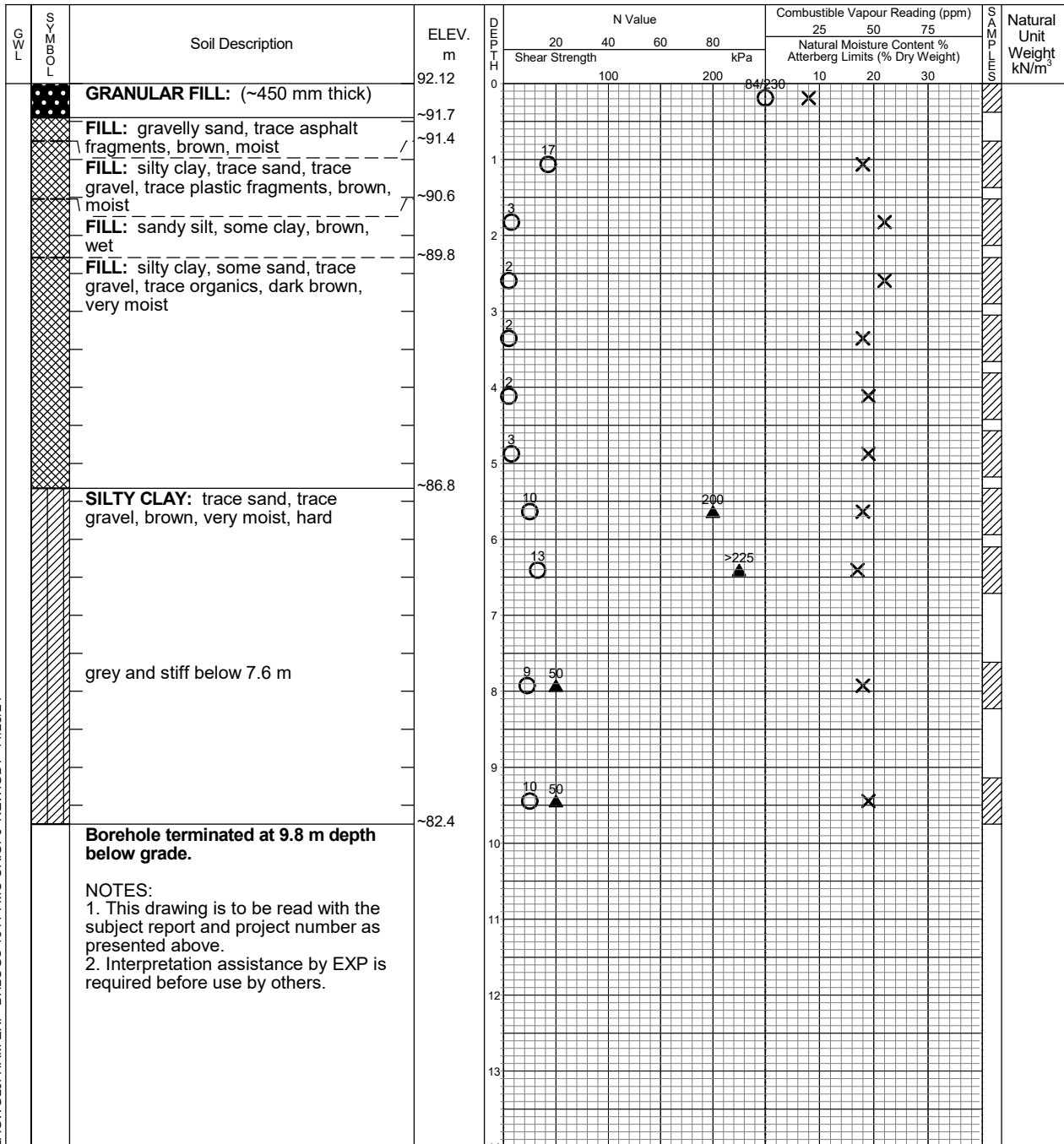
Plastic and Liquid Limit

Shelby Tube

Undrained Triaxial at % Strain at Failure

Field Vane Test

Penetrometer



LAGWGLJFHAM-EXP\_BHLOGS 1541 FMC CR.GPJ NEW.GDT 11/28/24



EXP Services Inc.  
Hamilton, Ontario  
Telephone: 905.573.4000  
Facsimile: 905.573.9693

Time	Water Level (m)	Depth to Cave (m)
on completion	dry	open

# Log of Borehole BH-7

Project No. HAM-24000672-A0

Drawing No. 9

Project: Proposed Mixed-Use Development

Sheet No. 1 of 1

Location: 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

Date Drilled: September 24, 2024

Auger Sample



Combustible Vapour Reading

Drill Type: D-50 Track Mount. Solid Stem.

SPT (N) Value



Natural Moisture



Datum: Geodetic

Dynamic Cone Test



Plastic and Liquid Limit



Shelby Tube



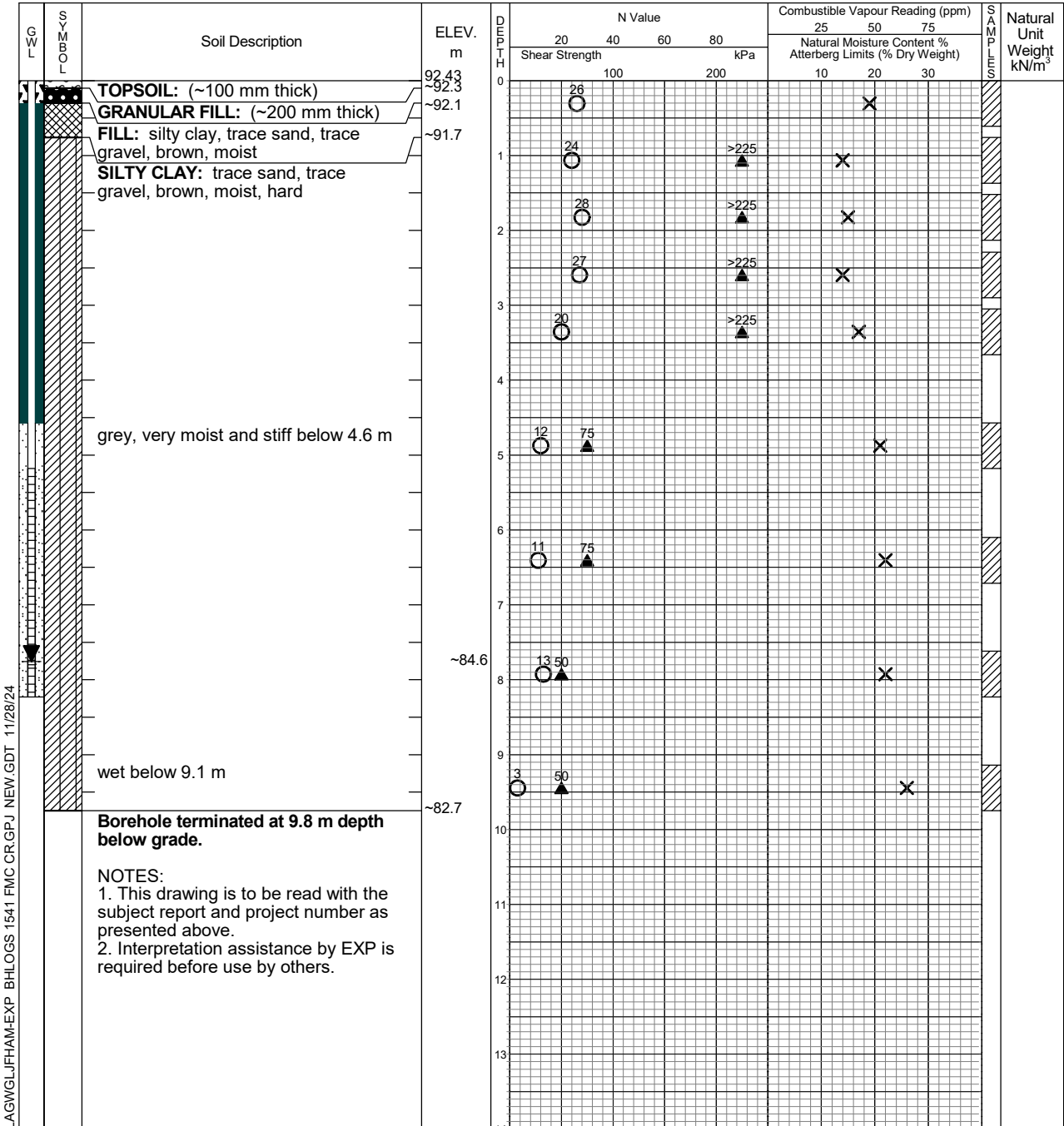
Undrained Triaxial at % Strain at Failure



Field Vane Test



Penetrometer



EXP Services Inc.  
Hamilton, Ontario  
Telephone: 905.573.4000  
Facsimile: 905.573.9693

Time	Water Level (m)	Depth to Cave (m)
on completion October 24, 2024	dry 7.8	open -

# Log of Borehole BH-8

Project No. HAM-24000672-A0

Drawing No. 10

Project: Proposed Mixed-Use Development

Sheet No. 1 of 1

Location: 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

Date Drilled: September 26, 2024

Auger Sample



Combustible Vapour Reading

SPT (N) Value



Natural Moisture



Drill Type: D-50 Track Mount. Solid Stem.

Dynamic Cone Test



Plastic and Liquid Limit



Datum: Geodetic

Shelby Tube



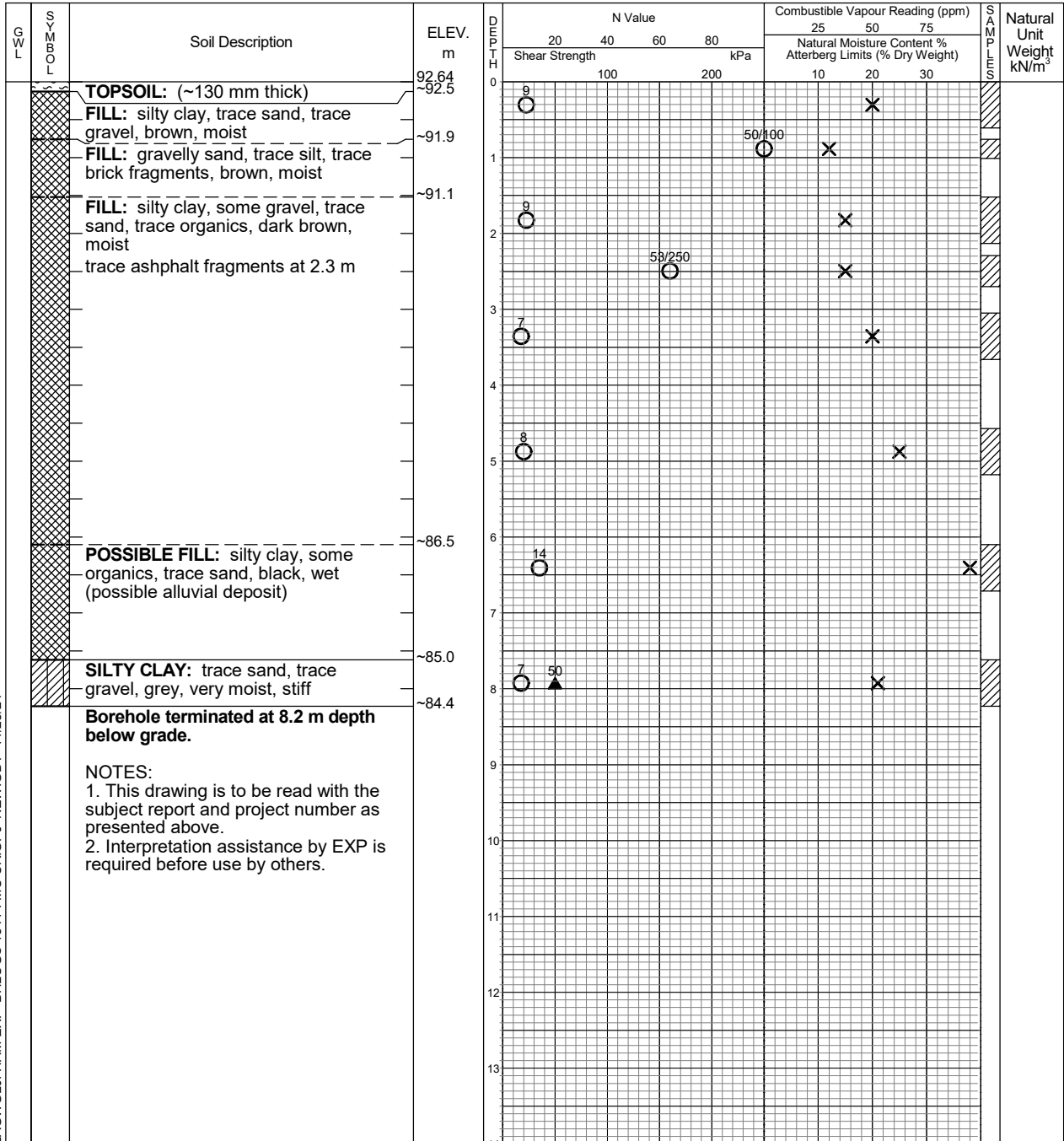
Undrained Triaxial at % Strain at Failure



Field Vane Test



Penetrometer



LAGWGLJFHAM-EXP\_BHLOGS 1541 FMC CR.GPJ NEW.GDT 11/28/24



EXP Services Inc.  
Hamilton, Ontario  
Telephone: 905.573.4000  
Facsimile: 905.573.9693

Time	Water Level (m)	Depth to Cave (m)
on completion	3.0	open

EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Appendix F – Quality Assurance and Quality Control Measures

## Quality Management, Control and Assurance

### Project Quality Management

Sample collection was performed using generally accepted principles and with appropriate sampling equipment. Written field sampling procedures for soil and groundwater developed by EXP were used to ensure consistency in sample collection and preparation of samples for submission to the laboratory. The Ministry of Environment, Conservation and Parks (MECP) document entitled *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, December 1996, was used as a reference.

The staff involved in the field sampling have participated in regular, ongoing EXP training programs and were qualified and experienced in collecting, describing, and preparing environmental samples for laboratory analysis.

Laboratory analysis was performed using generally accepted principles in accordance with the *Protocol for Analytical Methods Used in the Assessment of Properties* under Part XV.1 of the Environmental Protection Act (Protocol).

Data quality objectives for the parameters of concern were set to meet acceptable Reporting Detection Limits (RDLs) to achieve the goal of defining areas where such parameters are present at levels in excess of applicable generic Standards, as defined in Ontario Regulation (O. Reg.) 153/04, as amended to date, under the Environmental Protection Act. This included providing written instruction to the participating analytical laboratory describing the required analyses on the Chain of Custody prepared and delivered with the samples.

### Field Quality Assurance/Quality Control

The Sampling and Analysis Plans were prepared and executed based on the findings of the Phase One ESA Update (EXP, dated October 7, 2024), the needs of the client during future site redevelopment activities, and on professional judgment at the time of the investigation. Sampling and Analysis Plans for additional pH sampling and remediation activities were prepared and executed based on the findings the Phase Two ESA and associated investigative work

Field observations were made and documented in a field book in accordance with generally accepted practices and with the procedures developed and utilized by EXP.

EXP field sampling Quality Assurance/ Quality Control (QA/QC) protocols are tailored to the investigation and include, where appropriate:

- the collection of at least one duplicate sample per site for both soil and groundwater (where three or more such samples are collected);
- where volatile organic chemical analysis of groundwater is required, one trip blank shall be submitted for laboratory analysis with each submission;
- where volatile organic chemical analysis is required, the collection of discrete samples directly into sample bottles with teflon-lined lids and immediate placement into a cooler with free ice to maintain the temperature at less than 10° C for transport to the laboratory;

- the use of dedicated equipment for groundwater sampling at different monitors and the thorough cleaning of soil sampling equipment between sample sites; and,
- where sampling for trace organics (organic chemicals with a criterion value of less than 1 µg/g and/or samples collected for determination of background trace organic concentrations), ensuring that neither the bare hand or latex glove comes into contact with the soil or water as it is being placed into the laboratory sample container; soil sampling equipment used for the collection of trace organics is cleaned using soap & water, followed by a water rinse and a methanol rinse between sampling sites.

The results of the duplicate samples are presented along with the tabulated data in the report. Tabulated data are presented to a maximum of three significant digits where reported by the laboratory.

### Laboratory Quality Assurance/Quality Control

All laboratory analyses were completed by AGAT Laboratories (AGAT), accredited laboratories for these tests. AGAT performed the work following formal written methods and procedures. These methods include all the minimum requirements as specified in the Protocol.

EXP has accepted the data provided by AGAT based on the assurance from AGAT that as a minimum, the following requirements have been met and documentation to demonstrate compliance can be produced on request:

- the method performance criteria identified in the Protocol were met;
- sample storage requirements, pre-analysis processing techniques, and holding times for all sample types as identified in the Protocol were met;
- the results of all laboratory QC samples were within statistically determined control limits and if not, reasons were provided;
- surrogate recoveries (for organic analyses) were monitored and recorded;
- details on the precision and accuracy of the data have been recorded and retained and are available from the laboratory should they be required as a result of an MECP audit;
- the analytical data were reported without blank correction (unless the correction was clearly identified on the Certificate of Analysis);
- all soil sampling results were reported on a dry weight basis; and,
- a Certificate of Analysis with all QA/QC sample data, including surrogate recoveries, has been received from the laboratory and is appended.

Four (4) soil sample/field duplicate sample pair(s) were collected and analyzed for the following pCOCs:

- BH7-SS3/BH7-SS30 for PHCs/BTEX and VOCs;
- BH7-SS2/BH7-SS20 for PAHs and OCPs;
- BH7-SS1/BH7-SS10 for Metals and ORPs;
- BH1-SS1/BH1-SS1-0 for PCBs.

Four (4) groundwater sample/field duplicate sample pairs were collected and analyzed for the following pCOCs:

- BH5-23/BH5-23-0 for PHCs/BTEX, VOCs, PAHs, Metals and ORPs.
- BH7/BH7-0 for PHCs/BTEX, VOCs, PAHs, Metals and ORPs;
- BH7/BH7-0 for Metal and ORPs;
- BH4/BH4-0 for PAHs and PHCs/BTEX

A VOC trip blank was also transported to the site and submitted to the laboratory with the groundwater samples. A total of two (2) trip blank was analyzed for VOCs during the Phase Two ESA.

The relative percent differences (RPDs) of the soil and groundwater field duplicate samples are provided in this appendix. It should be noted that meaningful RPDs cannot be calculated if the analytical results are less than 5 times the reporting detection limits (RDLs) or if the average of the two sample concentrations are less than 5 times the RDL.

For soil samples, the alert limit criteria for the field duplicate RPD is >10% for EC, >30% for PHCs, OCPs, PCBs, metals (including hydride forming metals) and ORPs (Hg and SAR), >35% for ORPs (Cr (VI) and CN-), >40% for PAHs, ORPs (B-HWS), and >50% for VOCs. The calculated RPD between the duplicate samples and the original samples for soil was below the applicable alert limit criteria for all of the parameters analyzed, with the following exceptions:

- The RPD was 33% for arsenic, 40% for copper, 33% for lead, 45% for molybdenum, 45% for zinc, and 15% for electrical conductivity (EC) between sample BH7-SS1 and duplicate BH7-SS10.

Even though the calculated RPDs for metals and EC between sample BH7-SS1 and duplicate BH7-SS10 were above the alert limit criteria of 30% and 10%, respectively, this does not affect the conclusions of the Phase Two ESA as both concentrations of the samples and duplicates of the above-mentioned parameters were within the MECP (2011) Table 9 Site Condition Standards (SCS) for Residential/Parkland/Institutional/Commercial/Community/Industrial (RPI/ICC) property use, and medium to fine textured soils (hereinafter referred to as the "Table 9 SCS"). The RPD exceedances in soil are attributed to the surficial nature of the sample (SS1) leading to soil heterogeneity; the sample was observed to contain mostly granular material and asphalt.

For groundwater samples, the alert limit criteria for the field duplicate RPD is >30% for PHCs/BTEX, VOCs, and PAHs, and >20% for metals (including hydride-forming metals) and ORPs (Hg, Cr (VI), CN-, Na and Cl). The calculated RPD between the duplicate samples and the original samples for groundwater was below the applicable alert limit criteria for all of the parameters analyzed with the following exceptions:

- The RPD was 56% for molybdenum and 49% for selenium between sample BH5-23 and duplicate BH5-23-0;
- The RPD was 27% for copper, 54% for nickel and 37% for vanadium between sample BH7 and duplicate BH7-0;
- The RPD was 49% for molybdenum and 67% for vanadium between sample BH7 and duplicate BH7-0;

Even though the calculated RPD for metals between samples BH5-23 and its duplicate BH5-23-0, BH7 and its duplicate BH7-0, and BH7 and its duplicate BH7-0, were above the alert limit criteria of 20% this does not affect the conclusions of the Phase Two ESA, as concentrations of above-mentioned parameters were within the O. Reg. 153/04 Table 9 SCS. Therefore, the conclusions are not affected, and objectives of the Phase Two ESA are considered to have been met.

The trip blanks were below the laboratory RDL for all VOCs analyzed. No laboratory data quality issues were identified that would have a material effect on the interpretation of results presented in this report.

The overall assessment indicates that the soil and groundwater samples were collected with an acceptable level of precision, and the data is acceptable quality for meeting the objectives of the Phase Two ESA.

The subcontract laboratory used during this investigation, AGAT, is accredited by the Standards Council of Canada/Canadian Association of Environmental Analytical Laboratories in accordance with ISO/IEC 17025:1999 – “General Requirements for the Competence of Testing and Calibration Laboratories” for the analysis of all parameters for all samples in the scope of work for which SCS have been established under Ontario Regulation 153/04.

The analytical programs conducted by AGAT included analytical test group specific QA/QC measures to evaluate the accuracy and precision of the analytical results and the efficiency of analyte recovery during solute extraction procedures. The laboratory QA/QC program consisted of the preparation and analysis of laboratory duplicate samples to assess precision and sample homogeneity, method blanks to assess analytical bias, spiked blanks and QC standards to evaluate analyte recovery, matrix spikes to evaluate matrix interferences and surrogate compound recoveries (VOCs only) to evaluate extraction efficiency. The laboratory QA/QC results are presented in the Quality Assurance Report provided in the Certificate of Analysis prepared by AGAT. The QA/QC results are reported as percent recoveries for matrix spikes, spike blanks and QC standards, relative percent difference for laboratory duplicates and analyte concentrations for method blanks. The QA/QC results were assessed against test group control limits in the case of spiked blanks, matrix spikes and surrogate recoveries and alert criteria in the case of method blanks and laboratory duplicates. Review of the laboratory QA/QC results reported by AGAT indicated that they were within acceptable control limits or below applicable alert criteria for the sampled media and analytical test groups with the following exception;

- A molybdenum groundwater QA/QC lab exceedance was identified in the Lab CofA 24H204750. A method blank spike recovery was measured at 124% where the upper acceptable limit was 120%. Given that this indicates that our samples would be biased high for molybdenum and because our samples were all still within the MECP Table 9 Standards for molybdenum, for groundwater, this is not considered to affect the conclusions of the Phase Two ESA.

Based on the assessment of the QA/QC, the analytical results reported are of acceptable quality and data qualifications are not required.

# SOIL FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

## Petroleum Hydrocarbon Parameters

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Page 1 of 1

Location ID	MDL*	BH7		RPD	Alert Limit
		BH7-SS3	BH7-SS30		
Field Sample ID		6177168	6177169		
Lab ID		24-Sep-24	24-Sep-24		
Sampling Date		1.52 - 2.13	1.52 - 2.13		
Soil Sample Depth (mbgs)		EXP	EXP		
Consultant		AGAT	AGAT		
Laboratory		24H201833	24H201833		
Certificate of Analysis Number					
Benzene	0.02	<0.02	<0.02	nc	>30%
Toluene	0.05	<0.05	<0.05	nc	>30%
Ethylbenzene	0.05	<0.05	<0.05	nc	>30%
m-Xylene + p-Xylene	0.05	<0.05	<0.05	nc	>30%
o-Xylene	0.05	<0.05	<0.05	nc	>30%
Xylenes (Total)	0.05	<0.05	<0.05	nc	>30%
PHC F1 (C6-C10)	5	<5	<5	nc	>30%
PHC F1 (C6-C10) - BTEX	5	<5	<5	nc	>30%
PHC F2 (C10-C16)	10 (<7)	<10	<10	nc	>30%
PHC F3 (C16-C34)	50	<50	<50	nc	>30%
PHC F4 (C34-C50)	50	<50	<50	nc	>30%

### NOTES:

Analysis by AGAT.

All results in ppm (µg/g) and based on dry weight basis.

\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\*Depth below basement floor

'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.

Exceedences of alert limits are shown in **bold**.



# SOIL FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

## Volatile Organic Compounds

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Page 1 of 1

Location ID	MDL*	BH7		RPD	Alert Limit
		BH7-SS3	BH7-SS30		
Field Sample ID					
Lab ID		6177168	6177169		
Sampling Date		24-Sep-24	24-Sep-24		
Soil Sample Depth (mbgs)		1.52 - 2.13	1.52 - 2.13		
Consultant		EXP	EXP		
Laboratory		AGAT	AGAT		
Certificate of Analysis Number		24H201833	24H201833		
Acetone	0.5	<0.50	<0.50	nc	>50%
Benzene	0.02	<0.02	<0.02	nc	>50%
Bromodichloromethane	0.05	<0.05	<0.05	nc	>50%
Bromoform	0.05	<0.05	<0.05	nc	>50%
Bromomethane	0.05	<0.05	<0.05	nc	>50%
Carbon Tetrachloride	0.05	<0.05	<0.05	nc	>50%
Chlorobenzene	0.05	<0.05	<0.05	nc	>50%
Chloroform	0.04	<0.04	<0.04	nc	>50%
Dibromochloromethane	0.05	<0.05	<0.05	nc	>50%
1,2-Dichlorobenzene	0.05	<0.05	<0.05	nc	>50%
1,3-Dichlorobenzene	0.05	<0.05	<0.05	nc	>50%
1,4-Dichlorobenzene	0.05	<0.05	<0.05	nc	>50%
Dichlorodifluoromethane	0.05	<0.05	<0.05	nc	>50%
1,1-Dichloroethane	0.02	<0.02	<0.02	nc	>50%
1,2-Dichloroethane	0.03	<0.03	<0.03	nc	>50%
1,1-Dichloroethylene	0.05	<0.05	<0.05	nc	>50%
cis-1,2-Dichloroethylene	0.02	<0.02	<0.02	nc	>50%
trans-1,2-Dichloroethylene	0.05	<0.05	<0.05	nc	>50%
1,2-Dichloropropane	0.03	<0.03	<0.03	nc	>50%
cis- & trans-1,3-Dichloropropene	0.05	<0.05	<0.05	nc	>50%
Ethylbenzene	0.05	<0.05	<0.05	nc	>50%
Ethylene Dibromide (1,2-Dibromoethane)	0.04	<0.04	<0.04	nc	>50%
Hexane (n)	0.05	<0.05	<0.05	nc	>50%
Methylene chloride (Dichloromethane)	0.05	<0.05	<0.05	nc	>50%
Methyl ethyl ketone (2-Butanone)	0.5	<0.50	<0.50	nc	>50%
Methyl Isobutyl Ketone	0.5	<0.50	<0.50	nc	>50%
Methyl t-butyl ether (MTBE)	0.05	<0.05	<0.05	nc	>50%
Styrene	0.05	<0.05	<0.05	nc	>50%
1,1,1,2-Tetrachloroethane	0.04	<0.04	<0.04	nc	>50%
1,1,2,2-Tetrachloroethane	0.05	<0.05	<0.05	nc	>50%
Tetrachloroethylene	0.05	<0.05	<0.05	nc	>50%
Toluene	0.05	<0.05	<0.05	nc	>50%
1,1,1-Trichloroethane	0.05	<0.05	<0.05	nc	>50%
1,1,2-Trichloroethane	0.04	<0.04	<0.04	nc	>50%
Trichloroethylene	0.03	<0.03	<0.03	nc	>50%
Trichlorofluoromethane	0.05	<0.05	<0.05	nc	>50%
Vinyl Chloride	0.02	<0.02	<0.02	nc	>50%
m-Xylene + p-Xylene	0.05	<0.05	<0.05	nc	>50%
o-Xylene	0.05	<0.05	<0.05	nc	>50%
Xylenes (total)	0.05	<0.05	<0.05	nc	>50%

### NOTES:

Analysis by AGAT.

All results in ppm (µg/g) and based on dry weight basis.

\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\*Depth below basement floor

'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.

Exceedences of alert limits are shown in **bold**.



# SOIL FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

## Polycyclic Aromatic Hydrocarbons

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Page 1 of 1

Location ID	MDL*	BH7		RPD	Alert Limit
		BH7-SS2	BH7-SS20		
Field Sample ID		6177152	6177166		
Lab ID		24-Sep-24	24-Sep-24		
Sampling Date		0.76 - 1.37	0.76 - 1.37		
Soil Sample Depth (mbgs)		EXP	EXP		
Consultant		AGAT	AGAT		
Laboratory		24H201833	24H201833		
Certificate of Analysis Number					
Acenaphthene	0.05	<0.05	<0.05	nc	>40%
Acenaphthylene	0.05	<0.05	<0.05	nc	>40%
Anthracene	0.05	<0.05	<0.05	nc	>40%
Benzo(a)anthracene	0.05	<0.05	<0.05	nc	>40%
Benzo(a)pyrene	0.05	<0.05	<0.05	nc	>40%
Benzo(b)fluoranthene	0.05	<0.05	<0.05	nc	>40%
Benzo(ghi)perylene	0.05	<0.05	<0.05	nc	>40%
Benzo(k)fluoranthene	0.05	<0.05	<0.05	nc	>40%
Chrysene	0.05	<0.05	<0.05	nc	>40%
Dibenz(a,h)anthracene	0.05	<0.05	<0.05	nc	>40%
Fluoranthene	0.05	<0.05	<0.05	nc	>40%
Fluorene	0.05	<0.05	<0.05	nc	>40%
Indeno(1,2,3-cd)pyrene	0.05	<0.05	<0.05	nc	>40%
Naphthalene	0.05	<0.05	<0.05	nc	>40%
Phenanthrene	0.05	<0.05	<0.05	nc	>40%
Pyrene	0.05	<0.05	<0.05	nc	>40%
1&2-Methylnaphthalene	0.05	<0.05	<0.05	nc	>40%

### NOTES:

Analysis by AGAT.

All results in ppm (µg/g) and based on dry weight basis.

\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\*Depth below basement floor

'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.

Exceedences of alert limits are shown in **bold**.



## SOIL FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

### Metals, Hydride-Forming Metals and Other Regulated Parameters

GTR-24000672-CO, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Page 1 of 1

Location ID	MDL*	BH7		RPD	Alert Limit
Field Sample ID		BH7-SS1	BH7-SS10		
Lab ID		6177150	6177151		
Sampling Date		24-Sep-24	24-Sep-24		
Soil Sample Depth (mbgs)		0.0 - 0.61	0.0 - 0.61		
Consultant		EXP	EXP		
Laboratory		AGAT	AGAT		
Certificate of Analysis Number		24H201833	24H201833		
<b>Metals</b>					
Antimony	0.8	<0.8	<0.8	nc	>30%
Arsenic	1	5	7	<b>33</b>	>30%
Barium	2	60.2	71.9	18	>30%
Beryllium	0.5	<0.5	0.6	nc	>30%
Boron (Total)	5	8	9	12	>30%
Cadmium	0.5	0.6	0.7	15	>30%
Chromium (total)	5	15	17	13	>30%
Cobalt	0.8	6.7	8.2	20	>30%
Copper	1	32.6	49	<b>40</b>	>30%
Lead	1	35	49	<b>33</b>	>30%
Molybdenum	0.5	1.2	1.9	<b>45</b>	>30%
Nickel	1	15	18	18	>30%
Selenium	0.8	<0.8	<0.8	nc	>30%
Silver	0.5	<0.5	<0.5	nc	>30%
Thallium	0.5	<0.5	<0.5	nc	>30%
Uranium	0.5	<0.50	<0.50	nc	>30%
Vanadium	2	17.6	20	13	>30%
Zinc	5	152	240	<b>45</b>	>30%
<b>Other Regulated Parameters</b>					
Boron (hot water soluble)	0.1	0.77	0.89	14	>40%
Chromium VI	0.2	<0.2	<0.2	nc	>35%
Free Cyanide	0.04	<0.040	<0.040	nc	>35%
Mercury	0.1	<0.10	<0.10	nc	>30%
Electrical Conductivity (mS/cm)	0.005	0.328	0.283	<b>15</b>	>10%
Sodium Adsorption Ratio (unitless)	NA	0.324	0.322	1	>30%
pH (pH Units)	NA	7.24	7.14	1	NA

**NOTES:**

Analysis by AGAT.

All results in ppm (µg/g) and based on dry weight basis.

\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\*Depth below basement floor

'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.

Exceedences of alert limits are shown in **bold**.



# SOIL FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

## Polychlorinated Biphenyls

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Page 1 of 1

Location ID	MDL*	BH1		RPD	Alert Limit
Field Sample ID		BH1 - SS1	BH1 - SS1-0		
Lab ID		6182808	6182809		
Sampling Date		25-Sep-24	25-Sep-24		
Soil Sample Depth (mbgs)		0.0 - 0.61	0.0 - 0.61		
Consultant		EXP	EXP		
Laboratory		AGAT	AGAT		
Certificate of Analysis Number		24H202348	24H202348		
<b>Total Polychlorinated Biphenyls</b>	<b>0.1</b>	<b>&lt;0.1</b>	<b>&lt;0.1</b>	<b>nc</b>	<b>&gt;30%</b>

**NOTES:**

Analysis by AGAT.

All results in ppm (µg/g) and based on dry weight basis.

\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\*Depth below basement floor

'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.

Exceedences of alert limits are shown in **bold**.



# SOIL FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

## Organochlorine Pesticides

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Location ID	MDL*	BH7		RPD	Alert Limit
		BH7-SS2	BH7-SS20		
Field Sample ID		6177152	6177166		
Lab ID		24-Sep-24	24-Sep-24		
Sampling Date		0.76 - 1.37	0.76 - 1.37		
Soil Sample Depth (mbgs)		EXP	EXP		
Consultant		AGAT	AGAT		
Laboratory		24H201833	24H201833		
Certificate of Analysis Number					
Aldrin	0.005	<0.005	<0.005	nc	>30%
Alpha-Chlordane	0.005	<0.005	<0.005	nc	>30%
Chlordane	0.007	<0.007	<0.007	nc	>30%
DDD	0.007	<0.007	<0.007	nc	>30%
DDE	0.007	<0.007	<0.007	nc	>30%
DDT (Total)	0.007	<0.007	<0.007	nc	>30%
Dieldrin	0.005	<0.005	<0.005	nc	>30%
Endosulfan	0.005	<0.005	<0.005	nc	>30%
Endosulfan I	0.005	<0.005	<0.005	nc	>30%
Endosulfan II	0.005	<0.005	<0.005	nc	>30%
Endrin	0.005	<0.005	<0.005	nc	>30%
gamma-Chlordane	0.005	<0.005	<0.005	nc	>30%
Gamma-Hexachlorocyclohexane	0.005	<0.005	<0.005	nc	>30%
Heptachlor	0.005	<0.005	<0.005	nc	>30%
Heptachlor Epoxide	0.005	<0.005	<0.005	nc	>30%
Hexachlorobenzene	0.005	<0.005	<0.005	nc	>30%
Hexachlorobutadiene	0.01	<0.01	<0.01	nc	>30%
Hexachloroethane	0.005	<0.005	<0.005	nc	>30%
Methoxychlor	0.005	<0.005	<0.005	nc	>30%

**NOTES:**

Analysis by AGAT.

All results in ppm (µg/g) and based on dry weight basis.

\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\*Depth below basement floor

'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.

Exceedences of alert limits are shown in **bold**.



## GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

### Petroleum Hydrocarbon Parameters

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Page 1 of 3

Location ID	BH5-23		RPD	Alert Limit		
Field Sample ID	BH5-23	BH5-23-0				
Lab ID	MDL*	6194111	6194131			
Sampling Date		2-Oct-24	2-Oct-24			
Screen Interval Depth (mbgs)		5.33 - 6.85	5.33 - 6.85			
Consultant		EXP	EXP			
Laboratory		AGAT	AGAT			
Certificate of Analysis Number		24H204750	24H204750			
Benzene		0.2	<0.20	<0.20	nc	>30%
Toluene		0.2	<0.20	<0.20	nc	>30%
Ethylbenzene	0.1	<0.10	<0.10	nc	>30%	
m-Xylene + p-Xylene	0.2	<0.20	<0.20	nc	>30%	
o-Xylene	0.1	<0.10	<0.10	nc	>30%	
Xylenes (Total)	0.2	<0.20	<0.20	nc	>30%	
PHC F1 (C6-C10)	25	<25	<25	nc	>30%	
PHC F1 (C6-C10) - BTEX	25	<25	<25	nc	>30%	
PHC F2 (C10-C16)	100	<100	<100	nc	>30%	
PHC F3 (C16-C34)	100	<100	<100	nc	>30%	
PHC F4 (C34-C50)	100	<100	<100	nc	>30%	

**NOTES:**

Analysis by AGAT.  
 NA means 'not analyzed'.  
 All results in ppb (µg/L).  
 \* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.  
 \*\*Depth below basement floor  
 'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.  
 Exceedences of alert limits are shown in **bold**.



## GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

### Petroleum Hydrocarbon Parameters

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Page 2 of 3

Location ID	BH7		RPD	Alert Limit		
Field Sample ID	BH7	BH7-0				
Lab ID	MDL*	6348778	6348779			
Sampling Date		21-Nov-24	21-Nov-24			
Screen Interval Depth (mbgs)		4.57 - 7.62	4.57 - 7.62			
Consultant		EXP	EXP			
Laboratory		AGAT	AGAT			
Certificate of Analysis Number		24H224127	24H224127			
Benzene		0.2	<0.20	<0.20	nc	>30%
Toluene		0.2	<0.20	<0.20	nc	>30%
Ethylbenzene	0.1	<0.10	<0.10	nc	>30%	
m-Xylene + p-Xylene	0.2	<0.20	<0.20	nc	>30%	
o-Xylene	0.1	<0.10	<0.10	nc	>30%	
Xylenes (Total)	0.2	<0.20	<0.20	nc	>30%	
PHC F1 (C6-C10)	25	<25	<25	nc	>30%	
PHC F1 (C6-C10) - BTEX	25	<25	<25	nc	>30%	
PHC F2 (C10-C16)	100	<100	<100	nc	>30%	
PHC F3 (C16-C34)	100	<100	<100	nc	>30%	
PHC F4 (C34-C50)	100	<100	<100	nc	>30%	

**NOTES:**

Analysis by AGAT.  
 NA means 'not analyzed'.  
 All results in ppb (µg/L).  
 \* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.  
 \*\*Depth below basement floor  
 'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.  
 Exceedences of alert limits are shown in **bold**.



## GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

### Petroleum Hydrocarbon Parameters

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

Page 3 of 3

Location ID	MDL*	BH4		RPD	Alert Limit
		BH4	BH4-0		
Field Sample ID					
Lab ID		6376784	6376832		
Sampling Date		2-Dec-24	2-Dec-24		
Screen Interval Depth (mbgs)		0.91 - 3.96	0.91 - 3.96		
Consultant		EXP	EXP		
Laboratory		AGAT	AGAT		
Certificate of Analysis Number		24H227786	24H227786		
Benzene	0.2	<0.20	<0.20	nc	>30%
Toluene	0.2	<0.20	<0.20	nc	>30%
Ethylbenzene	0.1	<0.10	<0.10	nc	>30%
m-Xylene + p-Xylene	0.2	<0.20	<0.20	nc	>30%
o-Xylene	0.1	<0.10	<0.10	nc	>30%
Xylenes (Total)	0.2	<0.20	<0.20	nc	>30%
PHC F1 (C6-C10)	25	<25	<25	nc	>30%
PHC F1 (C6-C10) - BTEX	25	<25	<25	nc	>30%
PHC F2 (C10-C16)	100	<100	<100	nc	>30%
PHC F3 (C16-C34)	100	<100	<100	nc	>30%
PHC F4 (C34-C50)	100	<100	<100	nc	>30%

**NOTES:**

Analysis by AGAT.

NA means 'not analyzed'.

All results in ppb (µg/L).

\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\*Depth below basement floor

'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.

Exceedences of alert limits are shown in **bold**.



# GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

## Volatile Organic Compounds

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Location ID	MDL*	BH5-23		RPD	Alert Limit
		BH5-23	BH5-23-0		
Field Sample ID					
Lab ID		6194111	6194131		
Sampling Date		2-Oct-24	2-Oct-24		
Screen Interval Depth (mbgs)		5.33 - 6.85	5.33 - 6.85		
Consultant		EXP	EXP		
Laboratory		AGAT	AGAT		
Certificate of Analysis Number		24H204750	24H204750		
Acetone	1	<1.0	<1.0	nc	>30%
Benzene	0.2	<0.20	<0.20	nc	>30%
Bromodichloromethane	0.2	<0.20	<0.20	nc	>30%
Bromoform	0.1	<0.10	<0.10	nc	>30%
Bromomethane	0.2	<0.20	<0.20	nc	>30%
Carbon Tetrachloride	0.2	<0.20	<0.20	nc	>30%
Chlorobenzene	0.1	<0.10	<0.10	nc	>30%
Chloroform	0.2	<0.20	<0.20	nc	>30%
Dibromochloromethane	0.1	<0.10	<0.10	nc	>30%
1,2-Dichlorobenzene	0.1	<0.10	<0.10	nc	>30%
1,3-Dichlorobenzene	0.1	<0.10	<0.10	nc	>30%
1,4-Dichlorobenzene	0.1	<0.10	<0.10	nc	>30%
Dichlorodifluoromethane	0.4	<0.40	<0.40	nc	>30%
1,1-Dichloroethane	0.3	<0.30	<0.30	nc	>30%
1,2-Dichloroethane	0.2	<0.20	<0.20	nc	>30%
1,1-Dichloroethylene	0.3	<0.30	<0.30	nc	>30%
cis-1,2-Dichloroethylene	0.2	<0.20	<0.20	nc	>30%
trans-1,2-Dichloroethylene	0.2	<0.20	<0.20	nc	>30%
1,2-Dichloropropane	0.2	<0.20	<0.20	nc	>30%
cis- & trans-1,3-Dichloropropene	0.3	<0.30	<0.30	nc	>30%
Ethylbenzene	0.1	<0.10	<0.10	nc	>30%
Ethylene Dibromide (1,2-Dibromoethane)	0.1	<0.10	<0.10	nc	>30%
Hexane (n)	0.2	<0.20	<0.20	nc	>30%
Methylene chloride (Dichloromethane)	0.3	<0.30	<0.30	nc	>30%
Methyl ethyl ketone (2-Butanone)	1	<1.0	<1.0	nc	>30%
Methyl Isobutyl Ketone	1	<1.0	<1.0	nc	>30%
Methyl t-butyl ether (MTBE)	0.2	<0.20	<0.20	nc	>30%
Styrene	0.1	<0.10	<0.10	nc	>30%
1,1,1,2-Tetrachloroethane	0.1	<0.10	<0.10	nc	>30%
1,1,2,2-Tetrachloroethane	0.1	<0.10	<0.10	nc	>30%
Tetrachloroethylene	0.2	<0.20	<0.20	nc	>30%
Toluene	0.2	<0.20	<0.20	nc	>30%
1,1,1-Trichloroethane	0.3	<0.30	<0.30	nc	>30%
1,1,2-Trichloroethane	0.2	<0.20	<0.20	nc	>30%
Trichloroethylene	0.2	<0.20	<0.20	nc	>30%
Trichlorofluoromethane	0.4	<0.40	<0.40	nc	>30%
Vinyl Chloride	0.17	<0.17	<0.17	nc	>30%
m-Xylene + p-Xylene	0.2	<0.20	<0.20	nc	>30%
o-Xylene	0.1	<0.10	<0.10	nc	>30%
Xylenes (total)	0.2	<0.20	<0.20	nc	>30%

**NOTES:**

Analysis by AGAT.

All results in ppb (µg/L).

\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\*Depth below basement floor

'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.

Exceedences of alert limits are shown in **bold**.



# GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

## Volatile Organic Compounds

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

May 2025

Page 2 of 2

Location ID	MDL*	BH7		RPD	Alert Limit
		BH7	BH7-0		
Field Sample ID		6348778	6348779		
Lab ID		21-Nov-24	21-Nov-24		
Sampling Date		4.57 - 7.62	4.57 - 7.62		
Screen Interval Depth (mbgs)		EXP	EXP		
Consultant		AGAT	AGAT		
Laboratory		24H224127	24H224127		
Certificate of Analysis Number					
Acetone	1	<1.0	<1.0	nc	>30%
Benzene	0.2	<0.20	<0.20	nc	>30%
Bromodichloromethane	0.2	<0.20	<0.20	nc	>30%
Bromoform	0.1	<0.10	<0.10	nc	>30%
Bromomethane	0.2	<0.20	<0.20	nc	>30%
Carbon Tetrachloride	0.2	<0.20	<0.20	nc	>30%
Chlorobenzene	0.1	<0.10	<0.10	nc	>30%
Chloroform	0.2	<0.20	<0.20	nc	>30%
Dibromochloromethane	0.1	<0.10	<0.10	nc	>30%
1,2-Dichlorobenzene	0.1	<0.10	<0.10	nc	>30%
1,3-Dichlorobenzene	0.1	<0.10	<0.10	nc	>30%
1,4-Dichlorobenzene	0.1	<0.10	<0.10	nc	>30%
Dichlorodifluoromethane	0.4	<0.40	<0.40	nc	>30%
1,1-Dichloroethane	0.3	<0.30	<0.30	nc	>30%
1,2-Dichloroethane	0.2	<0.20	<0.20	nc	>30%
1,1-Dichloroethylene	0.3	<0.30	<0.30	nc	>30%
cis-1,2-Dichloroethylene	0.2	<0.20	<0.20	nc	>30%
trans-1,2-Dichloroethylene	0.2	<0.20	<0.20	nc	>30%
1,2-Dichloropropane	0.2	<0.20	<0.20	nc	>30%
cis- & trans-1,3-Dichloropropene	0.3	<0.30	<0.30	nc	>30%
Ethylbenzene	0.1	<0.10	<0.10	nc	>30%
Ethylene Dibromide (1,2-Dibromoethane)	0.1	<0.10	<0.10	nc	>30%
Hexane (n)	0.2	<0.20	<0.20	nc	>30%
Methylene chloride (Dichloromethane)	0.3	<0.30	<0.30	nc	>30%
Methyl ethyl ketone (2-Butanone)	1	<1.0	<1.0	nc	>30%
Methyl Isobutyl Ketone	1	<1.0	<1.0	nc	>30%
Methyl t-butyl ether (MTBE)	0.2	<0.20	<0.20	nc	>30%
Styrene	0.1	<0.10	<0.10	nc	>30%
1,1,1,2-Tetrachloroethane	0.1	<0.10	<0.10	nc	>30%
1,1,2,2-Tetrachloroethane	0.1	<0.10	<0.10	nc	>30%
Tetrachloroethylene	0.2	<0.20	<0.20	nc	>30%
Toluene	0.2	<0.20	<0.20	nc	>30%
1,1,1-Trichloroethane	0.3	<0.30	<0.30	nc	>30%
1,1,2-Trichloroethane	0.2	<0.20	<0.20	nc	>30%
Trichloroethylene	0.2	<0.20	<0.20	nc	>30%
Trichlorofluoromethane	0.4	<0.40	<0.40	nc	>30%
Vinyl Chloride	0.17	<0.17	<0.17	nc	>30%
m-Xylene + p-Xylene	0.2	<0.20	<0.20	nc	>30%
o-Xylene	0.1	<0.10	<0.10	nc	>30%
Xylenes (total)	0.2	<0.20	<0.20	nc	>30%

### NOTES:

Analysis by AGAT.

All results in ppb (µg/L).

\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

\*\*Depth below basement floor

'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.

Exceedences of alert limits are shown in **bold**.



**GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES**

**Polycyclic Aromatic Hydrocarbons**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Location ID	MDL*	BH5-23		RPD	Alert Limit
		BH5-23	BH5-23-0		
Field Sample ID					
Lab ID		6194111	6194131		
Sampling Date		2-Oct-24	2-Oct-24		
Screen Interval Depth (mbgs)		5.33 - 6.85	5.33 - 6.85		
Consultant		EXP	EXP		
Laboratory		AGAT	AGAT		
Certificate of Analysis Number		24H204750	24H204750		
Acenaphthene	0.2	<0.20	<0.20	nc	>30%
Acenaphthylene	0.2	<0.20	<0.20	nc	>30%
Anthracene	0.1	<0.10	<0.10	nc	>30%
Benzo(a)anthracene	0.2	<0.20	<0.20	nc	>30%
Benzo(a)pyrene	0.01	<0.01	<0.01	nc	>30%
Benzo(b/j)fluoranthene	0.1	<0.10	<0.10	nc	>30%
Benzo(ghi)perylene	0.2	<0.20	<0.20	nc	>30%
Benzo(k)fluoranthene	0.1	<0.10	<0.10	nc	>30%
Chrysene	0.1	<0.10	<0.10	nc	>30%
Dibenz(a,h)anthracene	0.2	<0.20	<0.20	nc	>30%
Fluoranthene	0.2	<0.20	<0.20	nc	>30%
Fluorene	0.2	<0.20	<0.20	nc	>30%
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	nc	>30%
Naphthalene	0.2	<0.20	<0.20	nc	>30%
Phenanthrene	0.1	<0.10	<0.10	nc	>30%
Pyrene	0.2	<0.20	<0.20	nc	>30%
1&2-Methylnaphthalene	0.2	<0.20	<0.20	nc	>30%

**NOTES:**

Analysis by AGAT.  
All results in ppb (µg/L).  
\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.  
'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.  
Exceedences of alert limits are shown in **bold**.



**GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES**

**Polycyclic Aromatic Hydrocarbons**

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Location ID	MDL*	BH7		RPD	Alert Limit
		BH7	BH7-0		
Field Sample ID					
Lab ID		6348778	6348779		
Sampling Date		21-Nov-24	21-Nov-24		
Screen Interval Depth (mbgs)		4.57 - 7.62	4.57 - 7.62		
Consultant		EXP	EXP		
Laboratory		AGAT	AGAT		
Certificate of Analysis Number		24H224127	24H224127		
Acenaphthene	0.2	<0.20	<0.20	nc	>30%
Acenaphthylene	0.2	<0.20	<0.20	nc	>30%
Anthracene	0.1	<0.10	<0.10	nc	>30%
Benzo(a)anthracene	0.2	<0.20	<0.20	nc	>30%
Benzo(a)pyrene	0.01	<0.01	<0.01	nc	>30%
Benzo(b/j)fluoranthene	0.1	<0.10	<0.10	nc	>30%
Benzo(ghi)perylene	0.2	<0.20	<0.20	nc	>30%
Benzo(k)fluoranthene	0.1	<0.10	<0.10	nc	>30%
Chrysene	0.1	<0.10	<0.10	nc	>30%
Dibenz(a,h)anthracene	0.2	<0.20	<0.20	nc	>30%
Fluoranthene	0.2	<0.20	<0.20	nc	>30%
Fluorene	0.2	<0.20	<0.20	nc	>30%
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	nc	>30%
Naphthalene	0.2	<0.20	<0.20	nc	>30%
Phenanthrene	0.1	<0.10	<0.10	nc	>30%
Pyrene	0.2	<0.20	<0.20	nc	>30%
1&2-Methylnaphthalene	0.2	<0.20	<0.20	nc	>30%

**NOTES:**

Analysis by AGAT.  
All results in ppb (µg/L).  
\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.  
'nc' means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.  
Exceedences of alert limits are shown in **bold**.



GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

Polycyclic Aromatic Hydrocarbons

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Location ID		BH4		RPD	Alert Limit
Field Sample ID	MDL*	BH4	BH4-0		
Lab ID		6376784	6376832		
Sampling Date		2-Dec-24	2-Dec-24		
Screen Interval Depth (mbgs)		0.91 - 3.96	0.91 - 3.96		
Consultant		EXP	EXP		
Laboratory		AGAT	AGAT		
Certificate of Analysis Number		24H227786	24H227786		
Acenaphthene	0.2	<0.20	<0.20	nc	>30%
Acenaphthylene	0.2	<0.20	<0.20	nc	>30%
Anthracene	0.1	<0.10	<0.10	nc	>30%
Benzo(a)anthracene	0.2	<0.20	<0.20	nc	>30%
Benzo(a)pyrene	0.01	<0.01	<0.01	nc	>30%
Benzo(b/j)fluoranthene	0.1	<0.10	<0.10	nc	>30%
Benzo(ghi)perylene	0.2	<0.20	<0.20	nc	>30%
Benzo(k)fluoranthene	0.1	<0.10	<0.10	nc	>30%
Chrysene	0.1	<0.10	<0.10	nc	>30%
Dibenz(a,h)anthracene	0.2	<0.20	<0.20	nc	>30%
Fluoranthene	0.2	<0.20	<0.20	nc	>30%
Fluorene	0.2	<0.20	<0.20	nc	>30%
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	nc	>30%
Naphthalene	0.2	<0.20	<0.20	nc	>30%
Phenanthrene	0.1	<0.10	<0.10	nc	>30%
Pyrene	0.2	<0.20	<0.20	nc	>30%
1&2-Methylnaphthalene	0.2	<0.20	<0.20	nc	>30%

NOTES:

Analysis by AGAT.

All results in ppb (µg/L).

\* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

"nc" means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.

Exceedences of alert limits are shown in **bold**.



GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES						
Metals, Hydride-Forming Metals and Other Regulated Parameters						
GTR-24000672-CO, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario						
May 2025						
Page 1 of 3						
Location ID		BH5-23				
Field Sample ID		BH5-23	BH5-23-0			
Lab ID		6194111	6194131			
Sampling Date		02-Oct-24	02-Oct-24			
Screen Interval Depth (mbgs)	MDL*	5.33 - 6.85	5.33 - 6.85	RPD		Alert Limit
Consultant		EXP	EXP			
Laboratory		AGAT	AGAT			
Certificate of Analysis Number		24H204750	24H204750			
<b>Metals</b>						
Antimony	1	<1.0	<1.0	nc		>20%
Arsenic	1	1.2	<1.0	nc		>20%
Barium	2	33.8	31.5	7		>20%
Beryllium	0.5	<0.50	<0.50	nc		>20%
Boron (Total)	10	256	257	0		>20%
Cadmium	0.2	<0.20	<0.20	nc		>20%
Chromium	2	<2.0	<2.0	nc		>20%
Cobalt	0.5	4.43	5.06	13		>20%
Copper	1	<1.0	<1.0	nc		>20%
Lead	0.5	<0.50	<0.50	nc		>20%
Molybdenum	0.5	4.7	8.37	<b>56</b>		>20%
Nickel	1	14.9	11.5	26		>20%
Selenium	1	5.3	3.2	<b>49</b>		>20%
Silver	0.2	<0.20	<0.20	nc		>20%
Thallium	0.3	<0.30	<0.30	nc		>20%
Uranium	0.5	27.9	27.6	1		>20%
Vanadium	0.4	0.5	<0.40	nc		>20%
Zinc	5	<5.0	<5.0	nc		>20%
<b>Other Regulated Parameters</b>						
Chromium VI	2	<2,000	<2,000	nc		>20%
Cyanide (Free)	2	<2	<2	nc		>20%
Mercury	0.02	<0.02	<0.02	nc		>20%
Sodium	50	327000	339000	4		>20%
Chloride	100	315000	319000	1		>20%

NOTES:  
 Analysis by AGAT.  
 All results in ppb (µg/L).  
 \* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.  
 \*\*depth below basement floor  
 "nc" means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.  
 Exceedences of alert limits are shown in **bold**.



GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES						
Metals, Hydride-Forming Metals and Other Regulated Parameters						
GTR-24000672-CO, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario						
May 2025						
Page 2 of 3						
Location ID		BH7				
Field Sample ID		BH7	BH7-0			
Lab ID		6348778	6348779			
Sampling Date		21-Nov-24	21-Nov-24			
Screen Interval Depth (mbgs)	MDL*	4.57 - 7.62	4.57 - 7.62	RPD		Alert Limit
Consultant		EXP	EXP			
Laboratory		AGAT	AGAT			
Certificate of Analysis Number		24H224127	24H224127			
<b>Metals</b>						
Antimony	1	<1.0	<1.0	nc		>20%
Arsenic	1	<1.0	<1.0	nc		>20%
Barium	2	24.3	25.2	4		>20%
Beryllium	0.5	<0.50	<0.50	nc		>20%
Boron (Total)	10	498	448	11		>20%
Cadmium	0.2	<0.20	<0.20	nc		>20%
Chromium	2	<2.0	<2.0	nc		>20%
Cobalt	0.5	2.43	2.06	18		>20%
Copper	1	1.3	1.7	nc		>20%
Lead	0.5	<0.50	<0.50	nc		>20%
Molybdenum	0.5	15.7	15.5	1		>20%
Nickel	1	7.8	4.5	<b>54</b>		>20%
Selenium	1	4.5	4.1	9		>20%
Silver	0.2	<0.20	<0.20	nc		>20%
Thallium	0.3	<0.30	<0.30	nc		>20%
Uranium	0.5	13.2	12.8	3		>20%
Vanadium	0.4	1.4	0.98	<b>37</b>		>20%
Zinc	5	<5.0	<5.0	nc		>20%
<b>Other Regulated Parameters</b>						
Chromium VI	2	<2,000	<2,000	nc		>20%
Cyanide (Free)	2	-	-	-		>20%
Mercury	0.02	<0.02	<0.02	nc		>20%
Sodium	50	-	-	-		>20%
Chloride	100	-	-	-		>20%

NOTES:  
 Analysis by AGAT.  
 All results in ppb (µg/L).  
 \* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.  
 \*\*depth below basement floor  
 "nc" means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.  
 Exceedences of alert limits are shown in **bold**.



GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES						
Metals, Hydride-Forming Metals and Other Regulated Parameters						
GTR-24000672-CO, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario						
May 2025						
Page 1 of 1						
Location ID		BH7				
Field Sample ID		BH7	BH7-0			
Lab ID		6376833	6376834			
Sampling Date		02-Sep-24	02-Sep-24			
Screen Interval Depth (mbgs)	MDL*	4.57 - 7.62	4.57 - 7.62	RPD		Alert Limit
Consultant		EXP	EXP			
Laboratory		AGAT	AGAT			
Certificate of Analysis Number		24H227786	24H227786			
<b>Metals</b>						
Antimony	1	<1.0	<1.0	nc		>20%
Arsenic	1	<1.0	<1.0	nc		>20%
Barium	2	22.5	24.7	9		>20%
Beryllium	0.5	<0.50	<0.50	nc		>20%
Boron (Total)	10	471	436	6		>20%
Cadmium	0.2	<0.20	<0.20	nc		>20%
Chromium	2	<2.0	<2.0	nc		>20%
Cobalt	0.5	2.64	2.98	2		>20%
Copper	1	1.2	1.4	15		>20%
Lead	0.5	<0.50	<0.50	nc		>20%
Molybdenum	0.5	9.78	16.2	<b>49</b>		>20%
Nickel	1	4.5	4.6	2		>20%
Selenium	1	<1.0	2.1	nc		>20%
Silver	0.2	<0.20	<0.20	nc		>20%
Thallium	0.3	<0.30	<0.30	nc		>20%
Uranium	0.5	11.2	11.7	4		>20%
Vanadium	0.4	0.78	1.56	<b>67</b>		>20%
Zinc	5	<5.0	<5.0	nc		>20%
<b>Other Regulated Parameters</b>						
Chromium VI	2	<2,000	<2,000	nc		>20%
Cyanide (Free)	2	<2	<2	nc		>20%
Mercury	0.02	<0.02	<0.02	nc		>20%
Sodium	50	256000	254000	1		>20%
Chloride	100	150000	148000	1		>20%

NOTES:  
 Analysis by AGAT.  
 All results in ppb (µg/L).  
 \* Minimum Analytical Reporting Detection Limit (MDL) is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.  
 \*\*depth below basement floor  
 "nc" means "not calculable", since one (or both) of the results are less than the RDL or the average of the two sample concentrations are less than 5 times the MDL.  
 Exceedences of alert limits are shown in **bold**.



## TRIP BLANK: Volatile Organic Compounds

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
May 2025

Location ID	Units	Alert Limit	Minimum RDL*	Trip Blank	Trip Blank
Field Sample ID				Trip Blank	Trip Blank
Lab ID				6194133	6348732
Sampling Date				02-Oct-24	21-Nov-24
Screen Interval Depth (mbgs)				-	-
Consultant				EXP	EXP
Laboratory				AGAT	AGAT
Certificate of Analysis Number				24H204750	24H224127
Acetone	µg/L	5	1	<1.0	<1.0
Benzene	µg/L	1	0.2	<0.20	<0.20
Bromodichloromethane	µg/L	1	0.2	<0.20	<0.20
Bromoform	µg/L	0.5	0.1	<0.10	<0.10
Bromomethane	µg/L	1	0.2	<0.20	<0.20
Carbon Tetrachloride	µg/L	1	0.2	<0.20	<0.20
Chlorobenzene	µg/L	0.5	0.1	<0.10	<0.10
Chloroform	µg/L	1	0.2	<0.20	<0.20
Dibromochloromethane	µg/L	0.5	0.1	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.1	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.1	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.1	<0.10	<0.10
Dichlorodifluoromethane	µg/L	2	0.4	<0.40	<0.40
1,1-Dichloroethane	µg/L	1.5	0.3	<0.30	<0.30
1,2-Dichloroethane	µg/L	1	0.2	<0.20	<0.20
1,1-Dichloroethylene	µg/L	1.5	0.3	<0.30	<0.30
cis-1,2-Dichloroethylene	µg/L	1	0.2	<0.20	<0.20
trans-1,2-Dichloroethylene	µg/L	1	0.2	<0.20	<0.20
1,2-Dichloropropane	µg/L	1	0.2	<0.20	<0.20
cis- & trans-1,3-Dichloropropene	µg/L	1.5	0.3	<0.30	<0.30
Ethylbenzene	µg/L	0.5	0.1	<0.10	<0.10
Ethylene Dibromide (1,2-Dibromoethane)	µg/L	0.5	0.1	<0.10	<0.10
Hexane (n)	µg/L	1	0.2	<0.20	<0.20
Methylene chloride (Dichloromethane)	µg/L	1.5	0.3	<0.30	<0.30
Methyl ethyl ketone (2-Butanone)	µg/L	5	1	<1.0	<1.0
Methyl Isobutyl Ketone	µg/L	5	1	<1.0	<1.0
Methyl t-butyl ether (MTBE)	µg/L	1	0.2	<0.20	<0.20
Styrene	µg/L	0.5	0.1	<0.10	<0.10
1,1,1,2-Tetrachloroethane	µg/L	0.5	0.1	<0.10	<0.10
1,1,1,2,2-Tetrachloroethane	µg/L	0.5	0.1	<0.10	<0.10
Tetrachloroethylene	µg/L	1	0.2	<0.20	<0.20
Toluene	µg/L	1	0.2	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	1.5	0.3	<0.30	<0.30
1,1,2-Trichloroethane	µg/L	1	0.2	<0.20	<0.20
Trichloroethylene	µg/L	1	0.2	<0.20	<0.20
Trichlorofluoromethane	µg/L	2	0.4	<0.40	<0.40
Vinyl Chloride	µg/L	0.85	0.17	<0.17	<0.17
m-Xylene + p-Xylene	µg/L	1	0.2	<0.20	<0.20
o-Xylene	µg/L	0.5	0.1	<0.10	<0.10
Xylenes (total)	µg/L	1	0.2	<0.20	<0.20

### NOTES:

All results in ppb (µg/L).

\* Minimum Reporting Detection Limit is listed. Refer to individual Certificate of Analyses for sample-specific Reporting Detection Limit (RDL) value.

Exceedances of the Alert Limit based on the Minimum Reporting Detection Limit is shown in bold, red and shaded.



EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Appendix G – Laboratory Certificates of Analysis

**CLIENT NAME: EXP SERVICES INC**  
**1266 SOUTH SERVICE ROAD, SUITE C1-1**  
**STONEY CREEK , ON L8E 5R9**  
**(905) 573-4000**

**ATTENTION TO: Amanda Catenaro**  
**PROJECT: GTR-24000672-C0-2**

**AGAT WORK ORDER: 24H201833**

**SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead**  
**TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist**

**DATE REPORTED: Oct 03, 2024**

**PAGES (INCLUDING COVER): 21**

**VERSION\*: 1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

**\*Notes**

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

# Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH2-SS2	BH4-SS2	BH7-SS1	BH7-SS10
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-09-24	2024-09-24	2024-09-24	2024-09-24
		G / S	RDL	6177134	6177144	6177150	6177151
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	6	2	5	7
Barium	µg/g	220	2.0	121	23.3	60.2	71.9
Beryllium	µg/g	2.5	0.5	0.7	<0.5	<0.5	0.6
Boron	µg/g	36	5	11	<5	8	9
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.35	<0.10	0.77	0.89
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	0.6	0.7
Chromium	µg/g	70	5	21	6	15	17
Cobalt	µg/g	21	0.8	10.5	3.1	6.7	8.2
Copper	µg/g	92	1.0	28.3	10.7	32.6	49.0
Lead	µg/g	120	1	6	6	35	49
Molybdenum	µg/g	2	0.5	0.6	<0.5	1.2	1.9
Nickel	µg/g	82	1	25	7	15	18
Selenium	µg/g	1.5	0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	0.51	<0.50	<0.50	<0.50
Vanadium	µg/g	86	2.0	29.4	10.5	17.6	20.0
Zinc	µg/g	290	5	48	29	152	240
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.185	0.257	0.328	0.283
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	0.431	0.234	0.324	0.322
pH, 2:1 CaCl <sub>2</sub> Extraction	pH Units		NA	7.46	7.38	7.24	7.14

**Certified By:**





# Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
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<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6177134-6177151** EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl<sub>2</sub> extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H201833

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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH2-SS2	BH4-SS2	BH7-SS2	BH7-SS20
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-09-24	2024-09-24	2024-09-24	2024-09-24
	G / S	RDL	6177134	6177144	6177152	6177166	
Hexachloroethane	µg/g	0.01	0.005	<0.005	<0.005	<0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.01	0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005
Aldrin	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan I	µg/g		0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan II	µg/g		0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005
Alpha-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005	<0.005
gamma-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007
op'-DDE	ug/g		0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005	<0.005	<0.005	<0.005
DDE	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007
op'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005
DDD	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007
op'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005
DDT (Total)	µg/g	1.4	0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005
Methoxychlor	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.01	0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.01	0.01	<0.01	<0.01	<0.01	<0.01
Moisture Content	%		0.1	9.7	13.0	12.5	12.5
wet weight OC	g		0.005	10.1	10.6	10.0	10.2
Surrogate	Unit	Acceptable Limits					
TCMX	%	50-140		78	106	78	84
Decachlorobiphenyl	%	50-140		103	116	106	90

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# Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6177134-6177166** Results are based on the dry weight of the soil.  
 DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.  
 DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.  
 DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.  
 Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.  
 Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.  
 The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H201833

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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH2-SS2	BH4-SS2	BH7-SS2	BH7-SS20
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-09-24	2024-09-24	2024-09-24	2024-09-24
	G / S	RDL	6177134	6177144	6177152	6177166	
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.12	0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.16	0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.56	0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.23	0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	0.59	0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	9.7	13.0	12.5	12.5
Surrogate	Unit	Acceptable Limits					
Naphthalene-d8	%	50-140		70	75	75	75
Acridine-d9	%	50-140		85	95	100	90
Terphenyl-d14	%	50-140		105	105	100	110

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6177134-6177166** Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH2-SS3	BH2-SS7	BH4-SS3	BH4-SS7	BH7-SS3	BH7-SS30	BH7-SS7
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-09-24	2024-09-24	2024-09-24	2024-09-24	2024-09-24	2024-09-24	2024-09-24
		G / S	RDL	6177137	6177143	6177146	6177147	6177168	6177169	6177170
F1 (C6 to C10)	µg/g	25	5	<5	<5	13	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	13	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	229	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	177	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	10.6	13.5	15.7	17.3	12.5	12.5	13.9
Surrogate	Unit	Acceptable Limits								
Toluene-d8	%	50-140		108	105	96	94	98	98	104
Terphenyl	%	60-140		81	81	83	74	72	78	78

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6177137-6177170** Results are based on sample dry weight.  
The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH2-SS3	BH2-SS7	BH4-SS3	BH4-SS7	BH7-SS3	BH7-SS30	BH7-SS7
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-09-24	2024-09-24	2024-09-24	2024-09-24	2024-09-24	2024-09-24	2024-09-24
	G / S	RDL	6177137	6177143	6177146	6177147	6177168	6177169	6177170	
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 24H201833

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CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY: JP

## O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH2-SS3	BH2-SS7	BH4-SS3	BH4-SS7	BH7-SS3	BH7-SS30	BH7-SS7
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-09-24	2024-09-24	2024-09-24	2024-09-24	2024-09-24	2024-09-24	2024-09-24
		G / S	RDL	6177137	6177143	6177146	6177147	6177168	6177169	6177170
Bromoform	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	10.6	13.5	15.7	17.3	12.5	12.5	13.9
<b>Surrogate</b>	<b>Unit</b>	<b>Acceptable Limits</b>								
Toluene-d8	% Recovery	50-140		108	105	96	94	98	98	104
4-Bromofluorobenzene	% Recovery	50-140		81	76	87	75	80	78	80

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6177137-6177170** The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**





**Exceedance Summary**

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6177146	BH4-SS3	ON T1 S RPI/ICC	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)	F2 (C10 to C16)	µg/g	10	229

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY: JP

Soil Analysis															
RPT Date: Oct 03, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - Metals & Inorganics (Soil)**

Antimony	6177134	6177134	<0.8	<0.8	NA	< 0.8	105%	70%	130%	98%	80%	120%	82%	70%	130%
Arsenic	6177134	6177134	6	6	0.0%	< 1	115%	70%	130%	97%	80%	120%	118%	70%	130%
Barium	6177134	6177134	121	120	0.8%	< 2.0	101%	70%	130%	100%	80%	120%	109%	70%	130%
Beryllium	6177134	6177134	0.7	0.8	NA	< 0.5	110%	70%	130%	111%	80%	120%	119%	70%	130%
Boron	6177134	6177134	11	11	NA	< 5	87%	70%	130%	94%	80%	120%	108%	70%	130%
Boron (Hot Water Soluble)	6177134	6177134	0.35	0.37	NA	< 0.10	115%	60%	140%	104%	70%	130%	104%	60%	140%
Cadmium	6177134	6177134	<0.5	<0.5	NA	< 0.5	108%	70%	130%	99%	80%	120%	114%	70%	130%
Chromium	6177134	6177134	21	21	NA	< 5	110%	70%	130%	93%	80%	120%	92%	70%	130%
Cobalt	6177134	6177134	10.5	10.8	2.8%	< 0.8	95%	70%	130%	87%	80%	120%	116%	70%	130%
Copper	6177134	6177134	28.3	28.1	0.7%	< 1.0	100%	70%	130%	91%	80%	120%	90%	70%	130%
Lead	6177134	6177134	6	6	0.0%	< 1	101%	70%	130%	89%	80%	120%	94%	70%	130%
Molybdenum	6177134	6177134	0.6	<0.5	NA	< 0.5	117%	70%	130%	99%	80%	120%	117%	70%	130%
Nickel	6177134	6177134	25	25	0.0%	< 1	110%	70%	130%	98%	80%	120%	117%	70%	130%
Selenium	6177134	6177134	<0.8	<0.8	NA	< 0.8	106%	70%	130%	103%	80%	120%	123%	70%	130%
Silver	6177134	6177134	<0.5	<0.5	NA	< 0.5	102%	70%	130%	97%	80%	120%	106%	70%	130%
Thallium	6177134	6177134	<0.5	<0.5	NA	< 0.5	106%	70%	130%	108%	80%	120%	118%	70%	130%
Uranium	6177134	6177134	0.51	0.54	NA	< 0.50	99%	70%	130%	90%	80%	120%	100%	70%	130%
Vanadium	6177134	6177134	29.4	28.5	3.1%	< 2.0	130%	70%	130%	81%	80%	120%	129%	70%	130%
Zinc	6177134	6177134	48	48	0.0%	< 5	110%	70%	130%	95%	80%	120%	109%	70%	130%
Chromium, Hexavalent	6177003		<0.2	<0.2	NA	< 0.2	110%	70%	130%	98%	80%	120%	74%	70%	130%
Cyanide, WAD	6180177		<0.040	<0.040	NA	< 0.040	96%	70%	130%	101%	80%	120%	103%	70%	130%
Mercury	6177134	6177134	<0.10	<0.10	NA	< 0.10	100%	70%	130%	96%	80%	120%	120%	70%	130%
Electrical Conductivity (2:1)	6177134	6177134	0.185	0.198	6.8%	< 0.005	97%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	6177134	6177134	0.431	0.379	12.8%	NA									
pH, 2:1 CaCl2 Extraction	6177134	6177134	7.46	7.44	0.3%	NA	99%	80%	120%						

Comments: NA signifies Not Applicable.  
 pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.  
 Duplicate NA: results are under 5X the RDL and will not be calculated.

**Certified By:**



## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY: JP

### Trace Organics Analysis

RPT Date: Oct 03, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - PAHs (Soil)**

Naphthalene	6180484		<0.05	<0.05	NA	< 0.05	73%	50%	140%	90%	50%	140%	78%	50%	140%
Acenaphthylene	6180484		<0.05	<0.05	NA	< 0.05	80%	50%	140%	85%	50%	140%	100%	50%	140%
Acenaphthene	6180484		<0.05	<0.05	NA	< 0.05	85%	50%	140%	95%	50%	140%	98%	50%	140%
Fluorene	6180484		<0.05	<0.05	NA	< 0.05	89%	50%	140%	93%	50%	140%	98%	50%	140%
Phenanthrene	6180484		<0.05	<0.05	NA	< 0.05	81%	50%	140%	73%	50%	140%	75%	50%	140%
Anthracene	6180484		<0.05	<0.05	NA	< 0.05	79%	50%	140%	103%	50%	140%	105%	50%	140%
Fluoranthene	6180484		<0.05	<0.05	NA	< 0.05	91%	50%	140%	85%	50%	140%	88%	50%	140%
Pyrene	6180484		<0.05	<0.05	NA	< 0.05	91%	50%	140%	85%	50%	140%	85%	50%	140%
Benzo(a)anthracene	6180484		<0.05	<0.05	NA	< 0.05	85%	50%	140%	75%	50%	140%	70%	50%	140%
Chrysene	6180484		<0.05	<0.05	NA	< 0.05	102%	50%	140%	73%	50%	140%	73%	50%	140%
Benzo(b)fluoranthene	6180484		<0.05	<0.05	NA	< 0.05	83%	50%	140%	75%	50%	140%	85%	50%	140%
Benzo(k)fluoranthene	6180484		<0.05	<0.05	NA	< 0.05	87%	50%	140%	98%	50%	140%	93%	50%	140%
Benzo(a)pyrene	6180484		<0.05	<0.05	NA	< 0.05	81%	50%	140%	75%	50%	140%	88%	50%	140%
Indeno(1,2,3-cd)pyrene	6180484		<0.05	<0.05	NA	< 0.05	83%	50%	140%	73%	50%	140%	73%	50%	140%
Dibenz(a,h)anthracene	6180484		<0.05	<0.05	NA	< 0.05	81%	50%	140%	85%	50%	140%	83%	50%	140%
Benzo(g,h,i)perylene	6180484		<0.05	<0.05	NA	< 0.05	70%	50%	140%	85%	50%	140%	80%	50%	140%

**O. Reg. 153(511) - OC Pesticides (Soil)**

Hexachloroethane	6173173		< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	87%	50%	140%	106%	50%	140%
Gamma-Hexachlorocyclohexane	6173173		< 0.005	< 0.005	NA	< 0.005	102%	50%	140%	107%	50%	140%	103%	50%	140%
Heptachlor	6173173		< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	103%	50%	140%	112%	50%	140%
Aldrin	6173173		< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	90%	50%	140%	117%	50%	140%
Heptachlor Epoxide	6173173		< 0.005	< 0.005	NA	< 0.005	100%	50%	140%	105%	50%	140%	109%	50%	140%
Endosulfan I	6173173		< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	106%	50%	140%	104%	50%	140%
Endosulfan II	6173173		< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	109%	50%	140%	114%	50%	140%
Alpha-Chlordane	6173173		< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	108%	50%	140%	104%	50%	140%
gamma-Chlordane	6173173		< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	111%	50%	140%	106%	50%	140%
op'-DDE	6173173		< 0.005	< 0.005	NA	< 0.005	113%	50%	140%	106%	50%	140%	102%	50%	140%
pp'-DDE	6173173		< 0.005	< 0.005	NA	< 0.005	95%	50%	140%	112%	50%	140%	113%	50%	140%
op'-DDD	6173173		< 0.005	< 0.005	NA	< 0.005	114%	50%	140%	116%	50%	140%	109%	50%	140%
pp'-DDD	6173173		< 0.005	< 0.005	NA	< 0.005	101%	50%	140%	112%	50%	140%	108%	50%	140%
op'-DDT	6173173		< 0.005	< 0.005	NA	< 0.005	112%	50%	140%	114%	50%	140%	102%	50%	140%
pp'-DDT	6173173		< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	106%	50%	140%	103%	50%	140%
Dieldrin	6173173		< 0.005	< 0.005	NA	< 0.005	95%	50%	140%	101%	50%	140%	103%	50%	140%
Endrin	6173173		< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	102%	50%	140%	86%	50%	140%
Methoxychlor	6173173		< 0.005	< 0.005	NA	< 0.005	82%	50%	140%	117%	50%	140%	116%	50%	140%
Hexachlorobenzene	6173173		< 0.005	< 0.005	NA	< 0.005	105%	50%	140%	92%	50%	140%	108%	50%	140%
Hexachlorobutadiene	6173173		< 0.01	< 0.01	NA	< 0.01	107%	50%	140%	103%	50%	140%	105%	50%	140%

**O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)**

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY: JP

### Trace Organics Analysis (Continued)

RPT Date: Oct 03, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
F1 (C6 to C10)	6177086		<5	<5	NA	< 5	109%	60%	140%	114%	60%	140%	88%	60%	140%	
F2 (C10 to C16)	6181101		< 10	< 10	NA	< 10	116%	60%	140%	110%	60%	140%	101%	60%	140%	
F3 (C16 to C34)	6181101		312	231	NA	< 50	116%	60%	140%	113%	60%	140%	89%	60%	140%	
F4 (C34 to C50)	6181101		< 50	< 50	NA	< 50	95%	60%	140%	88%	60%	140%	101%	60%	140%	
<b>O. Reg. 153(511) - VOCs (with PHC) (Soil)</b>																
Dichlorodifluoromethane	6177086		<0.05	<0.05	NA	< 0.05	71%	50%	140%	119%	50%	140%	105%	50%	140%	
Vinyl Chloride	6177086		<0.02	<0.02	NA	< 0.02	84%	50%	140%	110%	50%	140%	127%	50%	140%	
Bromomethane	6177086		<0.05	<0.05	NA	< 0.05	107%	50%	140%	128%	50%	140%	124%	50%	140%	
Trichlorofluoromethane	6177086		<0.05	<0.05	NA	< 0.05	74%	50%	140%	120%	50%	140%	119%	50%	140%	
Acetone	6177086		<0.50	<0.50	NA	< 0.50	97%	50%	140%	118%	50%	140%	107%	50%	140%	
1,1-Dichloroethylene	6177086		<0.05	<0.05	NA	< 0.05	72%	50%	140%	110%	60%	130%	85%	50%	140%	
Methylene Chloride	6177086		<0.05	<0.05	NA	< 0.05	106%	50%	140%	98%	60%	130%	100%	50%	140%	
Trans- 1,2-Dichloroethylene	6177086		<0.05	<0.05	NA	< 0.05	78%	50%	140%	100%	60%	130%	110%	50%	140%	
Methyl tert-butyl Ether	6177086		<0.05	<0.05	NA	< 0.05	77%	50%	140%	101%	60%	130%	89%	50%	140%	
1,1-Dichloroethane	6177086		<0.02	<0.02	NA	< 0.02	73%	50%	140%	86%	60%	130%	78%	50%	140%	
Methyl Ethyl Ketone	6177086		<0.50	<0.50	NA	< 0.50	98%	50%	140%	85%	50%	140%	115%	50%	140%	
Cis- 1,2-Dichloroethylene	6177086		<0.02	<0.02	NA	< 0.02	98%	50%	140%	100%	60%	130%	98%	50%	140%	
Chloroform	6177086		<0.04	<0.04	NA	< 0.04	103%	50%	140%	106%	60%	130%	102%	50%	140%	
1,2-Dichloroethane	6177086		<0.03	<0.03	NA	< 0.03	89%	50%	140%	96%	60%	130%	96%	50%	140%	
1,1,1-Trichloroethane	6177086		<0.05	<0.05	NA	< 0.05	82%	50%	140%	88%	60%	130%	95%	50%	140%	
Carbon Tetrachloride	6177086		<0.05	<0.05	NA	< 0.05	81%	50%	140%	92%	60%	130%	92%	50%	140%	
Benzene	6177086		<0.02	<0.02	NA	< 0.02	90%	50%	140%	97%	60%	130%	95%	50%	140%	
1,2-Dichloropropane	6177086		<0.03	<0.03	NA	< 0.03	94%	50%	140%	99%	60%	130%	102%	50%	140%	
Trichloroethylene	6177086		<0.03	<0.03	NA	< 0.03	84%	50%	140%	94%	60%	130%	94%	50%	140%	
Bromodichloromethane	6177086		<0.05	<0.05	NA	< 0.05	82%	50%	140%	88%	60%	130%	88%	50%	140%	
Methyl Isobutyl Ketone	6177086		<0.50	<0.50	NA	< 0.50	76%	50%	140%	107%	50%	140%	87%	50%	140%	
1,1,2-Trichloroethane	6177086		<0.04	<0.04	NA	< 0.04	103%	50%	140%	103%	60%	130%	104%	50%	140%	
Toluene	6177086		<0.05	<0.05	NA	< 0.05	99%	50%	140%	99%	60%	130%	98%	50%	140%	
Dibromochloromethane	6177086		<0.05	<0.05	NA	< 0.05	91%	50%	140%	98%	60%	130%	93%	50%	140%	
Ethylene Dibromide	6177086		<0.04	<0.04	NA	< 0.04	103%	50%	140%	92%	60%	130%	99%	50%	140%	
Tetrachloroethylene	6177086		<0.05	<0.05	NA	< 0.05	85%	50%	140%	107%	60%	130%	92%	50%	140%	
1,1,1,2-Tetrachloroethane	6177086		<0.04	<0.04	NA	< 0.04	83%	50%	140%	106%	60%	130%	102%	50%	140%	
Chlorobenzene	6177086		<0.05	<0.05	NA	< 0.05	94%	50%	140%	104%	60%	130%	95%	50%	140%	
Ethylbenzene	6177086		<0.05	<0.05	NA	< 0.05	76%	50%	140%	95%	60%	130%	86%	50%	140%	
m & p-Xylene	6177086		<0.05	<0.05	NA	< 0.05	79%	50%	140%	96%	60%	130%	90%	50%	140%	
Bromoform	6177086		<0.05	<0.05	NA	< 0.05	89%	50%	140%	116%	60%	130%	95%	50%	140%	
Styrene	6177086		<0.05	<0.05	NA	< 0.05	64%	50%	140%	74%	60%	130%	68%	50%	140%	
1,1,2,2-Tetrachloroethane	6177086		<0.05	<0.05	NA	< 0.05	104%	50%	140%	89%	60%	130%	98%	50%	140%	
o-Xylene	6177086		<0.05	<0.05	NA	< 0.05	86%	50%	140%	99%	60%	130%	92%	50%	140%	

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 &amp; 1546 FOUR MILE CREEK, NOTL

SAMPLED BY: JP

### Trace Organics Analysis (Continued)

RPT Date: Oct 03, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
1,3-Dichlorobenzene	6177086		<0.05	<0.05	NA	< 0.05	92%	50%	140%	107%	60%	130%	97%	50%	140%	
1,4-Dichlorobenzene	6177086		<0.05	<0.05	NA	< 0.05	96%	50%	140%	107%	60%	130%	100%	50%	140%	
1,2-Dichlorobenzene	6177086		<0.05	<0.05	NA	< 0.05	95%	50%	140%	102%	60%	130%	96%	50%	140%	
n-Hexane	6177086		<0.05	<0.05	NA	< 0.05	72%	50%	140%	81%	60%	130%	87%	50%	140%	

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

**Certified By:**


## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY:JP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Soil Analysis</b>			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY: JP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Trace Organics Analysis</b>			
Hexachloroethane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
Alpha-Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
op'-DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
op'-DDT	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDT (Total)	ORG-91-5113	modified from EPA 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
TCMX	ORG-91-5112	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE

## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY:JP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
wet weight OC	ORG-91-5113		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY: JP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H201833**
**PROJECT: GTR-24000672-C0-2**
**ATTENTION TO: Amanda Catenaro**
**SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK, NOTL**
**SAMPLED BY: JP**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS



### Laboratory Use Only

Work Order #: 24H201833  
Cooler Quantity: LG COOLER  
Arrival Temperatures: 4.3 | 4.6 | 5.2  
Depot Temperatures: 8.8 | 8.2 | 8.0  
Custody Seal Intact:  Yes  No  N/A  
Notes: LOOSE ICE

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**  
Company: EXP Services Inc.  
Contact: Amanda Catenaro  
Address: 220 Commerce Valley Dr. West  
Suite 110, Markham, ON  
Phone: 905-695-3217 Fax: \_\_\_\_\_  
Reports to be sent to: Amanda.catenaro@exp.com  
1. Email: \_\_\_\_\_  
2. Email: Jaimesya.latterson@exp.com

**Regulatory Requirements:**  
(Please check all applicable boxes)

Regulation 153/04  Regulation 406

Table Indicate One  
 Ind/Com  Res/Park  Agriculture

Soil Texture (Check One)  
 Coarse  Fine

Sewer Use  
 Sanitary  Storm

Region: \_\_\_\_\_

Prov. Water Quality Objectives (PWQO)  
 Other

Regulation 558  CCME

**Project Information:**  
Project: GTR-24000672-CO-2  
Site Location: Four Mile Creek Rd, North, ON  
Sampled By: JP  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

Please note: If quotation number is not provided, client will be billed full price for analysis.

**Is this submission for a Record of Site Condition (RSC)?**  
 Yes  No

**Report Guideline on Certificate of Analysis**  
 Yes  No

**Turnaround Time (TAT) Required:**

**Regular TAT**  5 to 7 Business Days

**Rush TAT** (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day

OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

**Invoice Information:** Bill To Same: Yes  No

Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: \_\_\_\_\_

**Legal Sample**

**Sample Matrix Legend**

GW Ground Water SD Sediment  
O Oil SW Surface Water  
P Paint R Rock/Shale  
S Soil

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N	Field Filtered - Metals, Hg, CrVI, DOC																
							Metals & Inorganics	Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB	BTEX, F1-F4 PHCS	VOC	PAHs	PCBs, Aroclors <input type="checkbox"/>	Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach msSPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs <input type="checkbox"/> DOC	Landfill Disposal Characterization TCLP: TCLP: <input type="checkbox"/> IM&I <input type="checkbox"/> VOCs <input type="checkbox"/> AGLNS <input type="checkbox"/> Blep <input type="checkbox"/> PCBs	Corrosivity: <input type="checkbox"/> Moisture <input type="checkbox"/> Sulphide	OC Pesticides	Potentially Hazardous or High Concentration (Y/N)				
1. BH2-552	Sept 24	AM	1	S			X																
2. BH2-555	2024	AM	1		HOLD		X																
3. BH2-553		AM	3						X	X													
4. BH2-557		AM	3						X	X													
5. BH4-552		AM	1				X																
6. BH4-553		AM	3						X	X													
7. BH4-557		AM	3						X	X													
8. BH4-558		AM	3		HOLD				X	X													
9. BH7-551		AM	1				X																
10. BH7-5510		AM	1				X																
11. BH7-552		AM	1																				

Samples Relinquished By (Print Name and Sign): <u>Jaime Patterson</u>	Date: <u>Sept 25/24</u> Time: <u>4:20</u>	Samples Received By (Print Name and Sign): <u>WAC</u>	Date: <u>Sept 25/24</u> Time: <u>4:20pm</u>
Samples Relinquished By (Print Name and Sign): <u>WAC</u>	Date: <u>Sept 26/24</u> Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>AB</u>	Date: <u>26-09</u> Time: <u>16:00</u>
Samples Relinquished By (Print Name and Sign):	Date:	Samples Received By (Print Name and Sign):	Date:

Page 1 of 2  
N: T-161687

Have feedback?  
Scan here for a quick survey!



5835 Coopers Avenue  
Mississauga, Ontario L4Z 1Y2  
Ph: 905.712.5100 Fax: 905.712.5122  
web@earth.agatlabs.com

**Laboratory Use Only**

Work Order #: 24H201933

Cooler Quantity: 1x COOLER

Arrival Temperatures: 8.8 8.2 8.0

Depot Temperatures: 8.8 8.2 8.0

Custody Seal Intact:  Yes  No  N/A

Notes: LOOSE LID

## Chain of Custody Record If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**

Company: Exp Services Inc.

Contact: \_\_\_\_\_

Address: SAA

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reports to be sent to:

1. Email: \_\_\_\_\_

2. Email: \_\_\_\_\_

**Regulatory Requirements:**  
(Please check all applicable boxes)

Regulation 153/04  Regulation 406  Sewer Use  
 Sanitary  Storm

Table Indicate One  Ind/Com  Res/Park  Agriculture

Table Indicate One  Ind/Com  Res/Park  Agriculture

Soil Texture (Check One)  Coarse  Fine

Regulation 558  CCME

Region: \_\_\_\_\_

Prov. Water Quality Objectives (PWQO)

Other \_\_\_\_\_

Indicate One

**Project Information:**

Project: STR-24000672-C0-2

Site Location: 1544 & 1546 Four mile Creek, Nott

Sampled By: JP

AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

Please note: If quotation number is not provided, client will be billed full price for analysis.

**Is this submission for a Record of Site Condition (RSC)?**

Yes  No

**Report Guideline on Certificate of Analysis**

Yes  No

**Turnaround Time (TAT) Required:**

**Regular TAT**  5 to 7 Business Days

**Rush TAT** (Rush Surcharges Apply)

3 Business Days  2 Business Days  Next Business Day

**OR Date Required** (Rush Surcharges May Apply): \_\_\_\_\_

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

**For 'Same Day' analysis, please contact your AGAT CSR**

**Invoice Information:**

Bill To Same: Yes  No

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

**Legal Sample**

**Sample Matrix Legend**

GW Ground Water SD Sediment  
O Oil SW Surface Water  
P Paint R Rock/Shale  
S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	Metals & Inorganics	Metals - <input type="checkbox"/> CrVI <input type="checkbox"/> Hg <input type="checkbox"/> HWSB	BTEX, F1-F4 PHCS	VOC	PAHS	PCBS, Aroclays <input type="checkbox"/>	Regulation 406 Characterization Package PH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach mSPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs <input type="checkbox"/> OC	Landfill Disposal Characterization TCLP: TCLP: <input type="checkbox"/> M&A <input type="checkbox"/> VOCs <input type="checkbox"/> ABNs <input type="checkbox"/> Ra/P <input type="checkbox"/> PCBs	Corrosivity: <input type="checkbox"/> Moisture <input type="checkbox"/> Sulphide	OC Pesticides	Potentially Hazardous or High Concentration (Y/N)
1. BH7-5520	Sept. 24	PM	1	S								X							X	
2. BH7-553	↓	↓	3	↓						X	X	X								
3. BH7-5530	↓	↓	3	↓						X	X	X								
4. BH7-557	↓	↓	3	↓						X	X	X								
5. BH7-559	↓	↓	3	↓	HOLD					X	X	X								
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				

Samples Relinquished By (Print Name and Sign): Jane Paterson Date: Sept 25/24 Time: 4:20pm

Samples Received By (Print Name and Sign): Dina C. [Signature] Date: Sept 25/24 Time: 4:20pm

Samples Relinquished By (Print Name and Sign): Dina C. [Signature] Date: Sept 26/24 Time: 3pm

Samples Received By (Print Name and Sign): [Signature] Date: 26/09 Time: 16:00

Page 2 of 2

N#: T-160743

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

**CLIENT NAME: EXP SERVICES INC**  
**220 Commerce Valley Drive West, Suite 500**  
**Markham, ON, ON L3T0A8**  
**(905) 695-3217**

**ATTENTION TO: Amanda Catenaro**  
**PROJECT: GTR-24000672-C0-2**

**AGAT WORK ORDER: 24H202348**

**SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead**  
**TRACE ORGANICS REVIEWED BY: Radhika Chakraborty, Trace Organics Lab Manager**

**DATE REPORTED: Oct 03, 2024**

**PAGES (INCLUDING COVER): 18**

**VERSION\*: 1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

**\*Notes**

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

# Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Four Mile creek

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH1 - SS1	BH5 - SS1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-25	2024-09-25
		G / S	RDL	6182808	6182818
Antimony	µg/g	1.3	0.8	<0.8	<0.8
Arsenic	µg/g	18	1	4	2
Barium	µg/g	220	2.0	75.8	163
Beryllium	µg/g	2.5	0.5	<0.5	1.1
Boron	µg/g	36	5	11	12
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.16	0.34
Cadmium	µg/g	1.2	0.5	<0.5	<0.5
Chromium	µg/g	70	5	35	52
Cobalt	µg/g	21	0.8	1.8	<0.8
Copper	µg/g	92	1.0	10.8	11.8
Lead	µg/g	120	1	20	6
Molybdenum	µg/g	2	0.5	0.5	<0.5
Nickel	µg/g	82	1	5	2
Selenium	µg/g	1.5	0.8	<0.8	1.4
Silver	µg/g	0.5	0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	0.54	1.57
Vanadium	µg/g	86	2.0	10.4	7.3
Zinc	µg/g	290	5	97	21
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.340	<b>0.882</b>
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	0.825	0.308
pH, 2:1 CaCl <sub>2</sub> Extraction	pH Units		NA	9.18	11.4

**Certified By:**





# Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Four Mile creek

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6182808-6182818** EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl<sub>2</sub> extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Four Mile creek

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH1 - SS2	BH5 - SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-25	2024-09-25
	G / S	RDL	6182810	6182821	
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05
Fluorene	µg/g	0.12	0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05
Anthracene	µg/g	0.16	0.05	<0.05	<0.05
Fluoranthene	µg/g	0.56	0.05	<0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.23	0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	0.59	0.05	<0.05	<0.05
Moisture Content	%		0.1	11.3	14.3
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140	70	85	
Acridine-d9	%	50-140	95	75	
Terphenyl-d14	%	50-140	80	105	

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6182810-6182821** Results are based on the dry weight of the soil.  
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**

R. Chakraborty

# Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Four Mile creek

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - PCBs (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH1 - SS1	BH1 - SS1 - O	BH5 - SS2
				Soil	Soil	Soil
				2024-09-25	2024-09-25	2024-09-25
				6182808	6182809	6182821
Polychlorinated Biphenyls	µg/g	0.3	0.1	<0.1	<0.1	<0.1
Moisture Content	%		0.1	19.6	10.0	14.3
				<b>Acceptable Limits</b>		
Decachlorobiphenyl	%	50-140		92	76	108

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6182808-6182821** Results are based on the dry weight of soil extracted.  
 PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.  
 The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**

*R. Chakraborty*

# Certificate of Analysis

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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Four Mile creek

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

SAMPLE DESCRIPTION:		BH1 - SS2		
SAMPLE TYPE:		Soil		
DATE SAMPLED:		2024-09-25		
Parameter	Unit	G / S	RDL	6182810
F1 (C6 to C10)	µg/g	25	5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5
F2 (C10 to C16)	µg/g	10	7	<7
F2 (C10 to C16) minus Naphthalene	µg/g		7	<7
F3 (C16 to C34)	µg/g	240	50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50
F4 (C34 to C50)	µg/g	120	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA
Moisture Content	%		0.1	11.3
Surrogate	Unit	Acceptable Limits		
Toluene-d8	%	50-140		100
Terphenyl	%	60-140		81

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6182810**

Results are based on sample dry weight.

The C6-C10 fraction is calculated using toluene response factor.

C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX and PAH contributions.

C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.

C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**

*R. Chakraborty*

# Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

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<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Four Mile creek

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

SAMPLE DESCRIPTION:		BH5 - SS2		
SAMPLE TYPE:		Soil		
DATE SAMPLED:		2024-09-25		
Parameter	Unit	G / S	RDL	6182819
F1 (C6 to C10)	µg/g	25	5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5
F2 (C10 to C16)	µg/g	10	7	<7
F3 (C16 to C34)	µg/g	240	50	79
F4 (C34 to C50)	µg/g	120	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA
Moisture Content	%		0.1	16.1
Surrogate	Unit	Acceptable Limits		
Toluene-d8	%	50-140		106
Terphenyl	%	60-140		91

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6182819** Results are based on sample dry weight.  
The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**

*R. Chakraborty*

# Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

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MISSISSAUGA, ONTARIO  
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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Four Mile creek

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH1 - SS2	BH5 - SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-25	2024-09-25
		G / S	RDL	6182810	6182819
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05

Certified By:

R. Chakraborty

# Certificate of Analysis

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## O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH1 - SS2	BH5 - SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-25	2024-09-25
	G / S	RDL	6182810	6182819	
Bromoform	ug/g	0.05	0.05	<0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05
Moisture Content	%		0.1	11.3	16.1
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		100	106
4-Bromofluorobenzene	% Recovery	50-140		88	88

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6182810-6182819** The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**

*R. Chakraborty*



**Exceedance Summary**

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

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CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6182818	BH5 - SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.57	0.882

## Quality Assurance

**CLIENT NAME:** EXP SERVICES INC  
**PROJECT:** GTR-24000672-C0-2  
**SAMPLING SITE:** Four Mile creek

**AGAT WORK ORDER:** 24H202348  
**ATTENTION TO:** Amanda Catenaro  
**SAMPLED BY:** JP

Soil Analysis															
RPT Date: Oct 03, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - Metals & Inorganics (Soil)**

Antimony	6182244		<0.8	<0.8	NA	< 0.8	128%	70%	130%	105%	80%	120%	83%	70%	130%
Arsenic	6182244		2	2	NA	< 1	105%	70%	130%	97%	80%	120%	92%	70%	130%
Barium	6182244		64.0	61.2	4.5%	< 2.0	117%	70%	130%	112%	80%	120%	115%	70%	130%
Beryllium	6182244		<0.5	<0.5	NA	< 0.5	104%	70%	130%	113%	80%	120%	110%	70%	130%
Boron	6182244		5	6	NA	< 5	84%	70%	130%	94%	80%	120%	88%	70%	130%
Boron (Hot Water Soluble)	6182534		0.11	0.11	NA	< 0.10	98%	60%	140%	99%	70%	130%	107%	60%	140%
Cadmium	6182244		<0.5	<0.5	NA	< 0.5	105%	70%	130%	96%	80%	120%	93%	70%	130%
Chromium	6182244		14	14	NA	< 5	98%	70%	130%	102%	80%	120%	104%	70%	130%
Cobalt	6182244		4.1	4.2	2.4%	< 0.8	96%	70%	130%	101%	80%	120%	94%	70%	130%
Copper	6182244		7.7	9.6	22.0%	< 1.0	93%	70%	130%	102%	80%	120%	92%	70%	130%
Lead	6182244		7	7	0.0%	< 1	105%	70%	130%	103%	80%	120%	99%	70%	130%
Molybdenum	6182244		<0.5	<0.5	NA	< 0.5	108%	70%	130%	102%	80%	120%	102%	70%	130%
Nickel	6182244		8	8	0.0%	< 1	99%	70%	130%	101%	80%	120%	93%	70%	130%
Selenium	6182244		<0.8	<0.8	NA	< 0.8	104%	70%	130%	98%	80%	120%	96%	70%	130%
Silver	6182244		<0.5	<0.5	NA	< 0.5	108%	70%	130%	100%	80%	120%	98%	70%	130%
Thallium	6182244		<0.5	<0.5	NA	< 0.5	110%	70%	130%	107%	80%	120%	106%	70%	130%
Uranium	6182244		<0.50	<0.50	NA	< 0.50	111%	70%	130%	105%	80%	120%	106%	70%	130%
Vanadium	6182244		24.1	24.7	2.5%	< 2.0	106%	70%	130%	102%	80%	120%	98%	70%	130%
Zinc	6182244		34	36	5.7%	< 5	97%	70%	130%	95%	80%	120%	91%	70%	130%
Chromium, Hexavalent	6180177		<0.2	<0.2	NA	< 0.2	90%	70%	130%	89%	80%	120%	75%	70%	130%
Cyanide, WAD	6182808	6182808	<0.040	<0.040	NA	< 0.040	100%	70%	130%	91%	80%	120%	109%	70%	130%
Mercury	6182244		<0.10	<0.10	NA	< 0.10	98%	70%	130%	99%	80%	120%	99%	70%	130%
Electrical Conductivity (2:1)	6182808	6182808	0.340	0.333	2.1%	< 0.005	96%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	6182808	6182808	0.825	0.725	12.9%	NA									
pH, 2:1 CaCl2 Extraction	6181246		7.00	6.86	2.0%	NA	100%	80%	120%						

Comments: NA signifies Not Applicable.  
 pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.  
 Duplicate NA: results are under 5X the RDL and will not be calculated.

**Certified By:** \_\_\_\_\_



## Quality Assurance

**CLIENT NAME:** EXP SERVICES INC  
**PROJECT:** GTR-24000672-C0-2  
**SAMPLING SITE:** Four Mile creek

**AGAT WORK ORDER:** 24H202348  
**ATTENTION TO:** Amanda Catenaro  
**SAMPLED BY:** JP

### Trace Organics Analysis

RPT Date: Oct 03, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

**O. Reg. 153(511) - PCBs (Soil)**

Polychlorinated Biphenyls	6177082		< 0.1	< 0.1	NA	< 0.1	94%	50%	140%	96%	50%	140%	105%	50%	140%
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**O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)**

F1 (C6 to C10)	6180937		< 5	< 5	NA	< 5	135%	60%	140%	118%	60%	140%	88%	60%	140%
F2 (C10 to C16)	6182114		< 10	< 10	NA	< 7	93%	60%	140%	117%	60%	140%	103%	60%	140%
F3 (C16 to C34)	6182114		< 50	< 50	NA	< 50	98%	60%	140%	112%	60%	140%	118%	60%	140%
F4 (C34 to C50)	6182114		< 50	< 50	NA	< 50	80%	60%	140%	114%	60%	140%	104%	60%	140%

**O. Reg. 153(511) - PAHs (Soil)**

Naphthalene	6176244		<0.05	<0.05	NA	< 0.05	95%	50%	140%	80%	50%	140%	88%	50%	140%
Acenaphthylene	6176244		<0.05	<0.05	NA	< 0.05	94%	50%	140%	88%	50%	140%	88%	50%	140%
Acenaphthene	6176244		<0.05	<0.05	NA	< 0.05	86%	50%	140%	83%	50%	140%	90%	50%	140%
Fluorene	6176244		<0.05	<0.05	NA	< 0.05	86%	50%	140%	75%	50%	140%	85%	50%	140%
Phenanthrene	6176244		<0.05	<0.05	NA	< 0.05	85%	50%	140%	73%	50%	140%	83%	50%	140%
Anthracene	6176244		<0.05	<0.05	NA	< 0.05	74%	50%	140%	78%	50%	140%	78%	50%	140%
Fluoranthene	6176244		<0.05	<0.05	NA	< 0.05	82%	50%	140%	108%	50%	140%	75%	50%	140%
Pyrene	6176244		<0.05	<0.05	NA	< 0.05	79%	50%	140%	93%	50%	140%	73%	50%	140%
Benzo(a)anthracene	6176244		<0.05	<0.05	NA	< 0.05	92%	50%	140%	78%	50%	140%	83%	50%	140%
Chrysene	6176244		<0.05	<0.05	NA	< 0.05	112%	50%	140%	88%	50%	140%	80%	50%	140%
Benzo(b)fluoranthene	6176244		<0.05	<0.05	NA	< 0.05	77%	50%	140%	90%	50%	140%	98%	50%	140%
Benzo(k)fluoranthene	6176244		<0.05	<0.05	NA	< 0.05	113%	50%	140%	75%	50%	140%	80%	50%	140%
Benzo(a)pyrene	6176244		<0.05	<0.05	NA	< 0.05	93%	50%	140%	78%	50%	140%	80%	50%	140%
Indeno(1,2,3-cd)pyrene	6176244		<0.05	<0.05	NA	< 0.05	87%	50%	140%	80%	50%	140%	85%	50%	140%
Dibenz(a,h)anthracene	6176244		<0.05	<0.05	NA	< 0.05	89%	50%	140%	73%	50%	140%	105%	50%	140%
Benzo(g,h,i)perylene	6176244		<0.05	<0.05	NA	< 0.05	134%	50%	140%	98%	50%	140%	73%	50%	140%

**O. Reg. 153(511) - VOCs (with PHC) (Soil)**

Dichlorodifluoromethane	6180937		<0.05	<0.05	NA	< 0.05	98%	50%	140%	100%	50%	140%	62%	50%	140%
Vinyl Chloride	6180937		<0.02	<0.02	NA	< 0.02	117%	50%	140%	102%	50%	140%	82%	50%	140%
Bromomethane	6180937		<0.05	<0.05	NA	< 0.05	104%	50%	140%	116%	50%	140%	88%	50%	140%
Trichlorofluoromethane	6180937		<0.05	<0.05	NA	< 0.05	114%	50%	140%	116%	50%	140%	77%	50%	140%
Acetone	6180937		<0.50	<0.50	NA	< 0.50	100%	50%	140%	83%	50%	140%	89%	50%	140%
1,1-Dichloroethylene	6180937		<0.05	<0.05	NA	< 0.05	96%	50%	140%	102%	60%	130%	87%	50%	140%
Methylene Chloride	6180937		<0.05	<0.05	NA	< 0.05	119%	50%	140%	110%	60%	130%	102%	50%	140%
Trans- 1,2-Dichloroethylene	6180937		<0.05	<0.05	NA	< 0.05	111%	50%	140%	110%	60%	130%	84%	50%	140%
Methyl tert-butyl Ether	6180937		<0.05	<0.05	NA	< 0.05	61%	50%	140%	109%	60%	130%	86%	50%	140%
1,1-Dichloroethane	6180937		<0.02	<0.02	NA	< 0.02	87%	50%	140%	74%	60%	130%	107%	50%	140%
Methyl Ethyl Ketone	6180937		<0.50	<0.50	NA	< 0.50	87%	50%	140%	90%	50%	140%	72%	50%	140%
Cis- 1,2-Dichloroethylene	6180937		<0.02	<0.02	NA	< 0.02	116%	50%	140%	104%	60%	130%	94%	50%	140%
Chloroform	6180937		<0.04	<0.04	NA	< 0.04	119%	50%	140%	108%	60%	130%	93%	50%	140%
1,2-Dichloroethane	6180937		<0.03	<0.03	NA	< 0.03	116%	50%	140%	113%	60%	130%	92%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from [www.cala.ca](http://www.cala.ca) and/or [www.scc.ca](http://www.scc.ca). The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

*Results relate only to the items tested. Results apply to samples as received.*

## Quality Assurance

**CLIENT NAME:** EXP SERVICES INC  
**PROJECT:** GTR-24000672-C0-2  
**SAMPLING SITE:** Four Mile creek

**AGAT WORK ORDER:** 24H202348  
**ATTENTION TO:** Amanda Catenaro  
**SAMPLED BY:** JP

### Trace Organics Analysis (Continued)

RPT Date: Oct 03, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1,1-Trichloroethane	6180937		<0.05	<0.05	NA	< 0.05	104%	50%	140%	101%	60%	130%	88%	50%	140%
Carbon Tetrachloride	6180937		<0.05	<0.05	NA	< 0.05	96%	50%	140%	101%	60%	130%	85%	50%	140%
Benzene	6180937		<0.02	<0.02	NA	< 0.02	105%	50%	140%	96%	60%	130%	95%	50%	140%
1,2-Dichloropropane	6180937		<0.03	<0.03	NA	< 0.03	108%	50%	140%	101%	60%	130%	95%	50%	140%
Trichloroethylene	6180937		<0.03	<0.03	NA	< 0.03	103%	50%	140%	96%	60%	130%	85%	50%	140%
Bromodichloromethane	6180937		<0.05	<0.05	NA	< 0.05	99%	50%	140%	93%	60%	130%	80%	50%	140%
Methyl Isobutyl Ketone	6180937		<0.50	<0.50	NA	< 0.50	88%	50%	140%	85%	50%	140%	79%	50%	140%
1,1,2-Trichloroethane	6180937		<0.04	<0.04	NA	< 0.04	117%	50%	140%	120%	60%	130%	90%	50%	140%
Toluene	6180937		<0.05	<0.05	NA	< 0.05	115%	50%	140%	108%	60%	130%	87%	50%	140%
Dibromochloromethane	6180937		<0.05	<0.05	NA	< 0.05	97%	50%	140%	97%	60%	130%	76%	50%	140%
Ethylene Dibromide	6180937		<0.04	<0.04	NA	< 0.04	100%	50%	140%	112%	60%	130%	83%	50%	140%
Tetrachloroethylene	6180937		<0.05	<0.05	NA	< 0.05	110%	50%	140%	115%	60%	130%	88%	50%	140%
1,1,1,2-Tetrachloroethane	6180937		<0.04	<0.04	NA	< 0.04	103%	50%	140%	109%	60%	130%	86%	50%	140%
Chlorobenzene	6180937		<0.05	<0.05	NA	< 0.05	111%	50%	140%	104%	60%	130%	91%	50%	140%
Ethylbenzene	6180937		<0.05	<0.05	NA	< 0.05	98%	50%	140%	96%	60%	130%	99%	50%	140%
m & p-Xylene	6180937		<0.05	<0.05	NA	< 0.05	104%	50%	140%	105%	60%	130%	87%	50%	140%
Bromoform	6180937		<0.05	<0.05	NA	< 0.05	118%	50%	140%	108%	60%	130%	87%	50%	140%
Styrene	6180937		<0.05	<0.05	NA	< 0.05	78%	50%	140%	77%	60%	130%	82%	50%	140%
1,1,2,2-Tetrachloroethane	6180937		<0.05	<0.05	NA	< 0.05	105%	50%	140%	111%	60%	130%	92%	50%	140%
o-Xylene	6180937		<0.05	<0.05	NA	< 0.05	108%	50%	140%	106%	60%	130%	90%	50%	140%
1,3-Dichlorobenzene	6180937		<0.05	<0.05	NA	< 0.05	110%	50%	140%	112%	60%	130%	86%	50%	140%
1,4-Dichlorobenzene	6180937		<0.05	<0.05	NA	< 0.05	111%	50%	140%	113%	60%	130%	90%	50%	140%
1,2-Dichlorobenzene	6180937		<0.05	<0.05	NA	< 0.05	115%	50%	140%	105%	60%	130%	92%	50%	140%
n-Hexane	6180937		<0.05	<0.05	NA	< 0.05	104%	50%	140%	105%	60%	130%	80%	50%	140%

**O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)**

F1 (C6 to C10)	6180937		<5	<5	NA	< 5	135%	60%	140%	118%	60%	140%	88%	60%	140%
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Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

**Certified By:**

*R. Chakraborty*

## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mile creek

SAMPLED BY: JP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Soil Analysis</b>			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H202348**
**PROJECT: GTR-24000672-C0-2**
**ATTENTION TO: Amanda Catenaro**
**SAMPLING SITE: Four Mile creek**
**SAMPLED BY: JP**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Trace Organics Analysis</b>			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082A	GC/ECD
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mile creek

SAMPLED BY: JP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H202348**
**PROJECT: GTR-24000672-C0-2**
**ATTENTION TO: Amanda Catenaro**
**SAMPLING SITE: Four Mile creek**
**SAMPLED BY: JP**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

Have feedback?  
Scan here for a quick survey!



5835 Coopers Avenue  
Mississauga, Ontario L4Z 1Y2  
Ph: 905.712.5100 Fax: 905.712.5122  
wehearth.agatlabs.com

### Laboratory Use Only

Work Order #: 244202348  
Cooler Quantity: LG  
Arrival Temperatures: 3.6 | 3.2 | 3.8  
Depot Temperatures: 5.0 | 5.2 | 5.4  
Custody Seal Intact:  Yes  No  N/A  
Notes: LOOSE ICE

## Chain of Custody Record If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: EXP Services Inc.  
Contact: Amanda Catarano  
Address: 990 Commerce Valley Dr. W. Suite 110 Markham, ON  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: Amanda.Catarano@exp.com  
2. Email: Jamesyn.Patterson@exp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Regulation 406  Sewer Use  
 Sanitary  Storm  
Table 1 Indicate One  Ind/Com  Res/Park  Agriculture  
Soil Texture (check One)  Coarse  Fine  Regulation 558  CCME  
Region: \_\_\_\_\_  
Prov. Water Quality Objectives (PWQO)  Other \_\_\_\_\_  
Indicate One

Is this submission for a Record of Site Condition (RSC)?  
 Yes  No

Report Guideline on Certificate of Analysis  
 Yes  No

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days  
Rush TAT (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

### Project Information:

Project: GTR-24000072-C0-2  
Site Location: Four mile Creek Rd. NOTL, ON  
Sampled By: JP  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Invoice Information:

Company: \_\_\_\_\_ Bill To Same: Yes  No   
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: \_\_\_\_\_

Legal Sample

### Sample Matrix Legend

GW Ground Water SD Sediment  
O Oil SW Surface Water  
P Paint R Rock/Shale  
S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	Metals & Inorganics	Metals - CrVI, Hg, HWSB	BTEX, FLF4 PHCS	VOC	PCBs: Aroclors	Regulation 406 Characterization Package pH, Metals, BTEX, FLF4 EC, SAR	Regulation 406 SFLP Rainwater Leach mSFLP: Metals, VOCs, SVOCs, DOC	Landfill Disposal Characterization TCLP: TCLP: M&I, VOCs, APHS, BHA/P, PCBs	Corrosivity: Moisture Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. BHI-SS1	Sept. 25/24	AM	1	S	Limited Sample			X					X				
2. BHI-SS1-0		AM	1	S	Limited Sample								X				
3. BHI-SS2		AM	4							X	X						
4. BHI-SS6		AM	3		HOLD					X	X						
5. BHI-SS7		AM	2		HOLD			X				X					
6. BHS-SS1		AM	1					X				X					
7. BHS-SS2		AM	5					X				X					
8. BHS-SS7		AM	5		HOLD			X				X					
9. BHS-SS2		AM	1									X					
10.		AM															
11.		AM															

Samples Relinquished By (Print Name and Sign): <u>Jamesyn Patterson</u>	Date: <u>Sept. 26/24</u> Time: <u>4pm</u>	Samples Received By (Print Name and Sign): <u>DMC</u>	Date: <u>Sept 26/24</u> Time: <u>2:25pm</u>
Samples Relinquished By (Print Name and Sign): <u>DMC</u>	Date: <u>Sept 27/24</u> Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>JP</u>	Date: <u>27.09</u> Time: <u>16.40</u>
Samples Relinquished By (Print Name and Sign):	Date:	Samples Received By (Print Name and Sign):	Date:

Page 1 of 1  
N°: T-161662

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

**CLIENT NAME: EXP SERVICES INC**  
**220 Commerce Valley Drive West, Suite 500**  
**Markham, ON, ON L3T0A8**  
**(905) 695-3217**

**ATTENTION TO: Amanda Catenaro**  
**PROJECT: GTR-24000672-C0-2**

**AGAT WORK ORDER: 24H202434**

**SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead**  
**TRACE ORGANICS REVIEWED BY: Radhika Chakraborty, Trace Organics Lab Manager**

**DATE REPORTED: Oct 03, 2024**

**PAGES (INCLUDING COVER): 19**

**VERSION\*: 1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

**\*Notes**

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

# Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC  
SAMPLING SITE: Far Mile Creek Road

ATTENTION TO: Amanda Catenaro  
SAMPLED BY:

## O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION: BH3 - SS1		
		G / S	RDL	6182498
Antimony	µg/g	1.3	0.8	<0.8
Arsenic	µg/g	18	1	4
Barium	µg/g	220	2.0	109
Beryllium	µg/g	2.5	0.5	0.5
Boron	µg/g	36	5	6
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.49
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	70	5	18
Cobalt	µg/g	21	0.8	6.7
Copper	µg/g	92	1.0	20.2
Lead	µg/g	120	1	39
Molybdenum	µg/g	2	0.5	0.6
Nickel	µg/g	82	1	15
Selenium	µg/g	1.5	0.8	<0.8
Silver	µg/g	0.5	0.5	<0.5
Thallium	µg/g	1	0.5	<0.5
Uranium	µg/g	2.5	0.50	0.71
Vanadium	µg/g	86	2.0	26.9
Zinc	µg/g	290	5	80
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.178
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	0.203
pH, 2:1 CaCl <sub>2</sub> Extraction	pH Units		NA	6.87

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
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<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Far Mile Creek Road

ATTENTION TO: Amanda Catenaro

SAMPLED BY:

## O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6182498** EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl<sub>2</sub> extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Far Mile Creek Road

ATTENTION TO: Amanda Catenaro

SAMPLED BY:


## O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

		SAMPLE DESCRIPTION: BH3 - SS2			
		SAMPLE TYPE: Soil			
		DATE SAMPLED: 2024-09-26			
Parameter	Unit	G / S	RDL	6182499	
Hexachloroethane	µg/g	0.01	0.005	<0.005	
Gamma-Hexachlorocyclohexane	µg/g	0.01	0.005	<0.005	
Heptachlor	µg/g	0.05	0.005	<0.005	
Aldrin	µg/g	0.05	0.005	<0.005	
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	
Endosulfan I	µg/g		0.005	<0.005	
Endosulfan II	µg/g		0.005	<0.005	
Endosulfan	µg/g	0.04	0.005	<0.005	
Alpha-Chlordane	µg/g		0.005	<0.005	
gamma-Chlordane	µg/g		0.005	<0.005	
Chlordane	µg/g	0.05	0.007	<0.007	
op'-DDE	ug/g		0.005	<0.005	
pp'-DDE	µg/g		0.005	<0.005	
DDE	µg/g	0.05	0.007	<0.007	
op'-DDD	µg/g		0.005	<0.005	
pp'-DDD	µg/g		0.005	<0.005	
DDD	µg/g	0.05	0.007	<0.007	
op'-DDT	µg/g		0.005	<0.005	
pp'-DDT	µg/g		0.005	<0.005	
DDT (Total)	µg/g	1.4	0.007	<0.007	
Dieldrin	µg/g	0.05	0.005	<0.005	
Endrin	µg/g	0.04	0.005	<0.005	
Methoxychlor	µg/g	0.05	0.005	<0.005	
Hexachlorobenzene	µg/g	0.01	0.005	<0.005	
Hexachlorobutadiene	µg/g	0.01	0.01	<0.01	
Moisture Content	%		0.1	9.9	
wet weight OC	g		0.01	10.20	
Surrogate	Unit	Acceptable Limits			
TCMX	%	50-140		96	
Decachlorobiphenyl	%	50-140		104	

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Far Mile Creek Road

ATTENTION TO: Amanda Catenaro

SAMPLED BY:

## O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6182499** Results are based on the dry weight of the soil.  
 DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.  
 DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.  
 DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.  
 Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.  
 Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.  
 The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**

*R. Chakraborty*

# Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
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<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC  
SAMPLING SITE: Far Mile Creek Road

ATTENTION TO: Amanda Catenaro  
SAMPLED BY:

## O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

		SAMPLE DESCRIPTION: BH3 - SS2			
		SAMPLE TYPE: Soil			
		DATE SAMPLED: 2024-09-26			
Parameter	Unit	G / S	RDL	6182499	
Naphthalene	µg/g	0.09	0.05	<0.05	
Acenaphthylene	µg/g	0.093	0.05	<0.05	
Acenaphthene	µg/g	0.072	0.05	<0.05	
Fluorene	µg/g	0.12	0.05	<0.05	
Phenanthrene	µg/g	0.69	0.05	<0.05	
Anthracene	µg/g	0.16	0.05	<0.05	
Fluoranthene	µg/g	0.56	0.05	<0.05	
Pyrene	µg/g	1	0.05	<0.05	
Benzo(a)anthracene	µg/g	0.36	0.05	<0.05	
Chrysene	µg/g	2.8	0.05	<0.05	
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05	
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	
Indeno(1,2,3-cd)pyrene	µg/g	0.23	0.05	<0.05	
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05	
2-and 1-methyl Naphthalene	µg/g	0.59	0.05	<0.05	
Moisture Content	%		0.1	9.9	
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140		70	
Acridine-d9	%	50-140		95	
Terphenyl-d14	%	50-140		85	

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6182499** Results are based on the dry weight of the soil.  
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**

*R. Chakraborty*

# Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
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FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC  
SAMPLING SITE: Far Mile Creek Road

ATTENTION TO: Amanda Catenaro  
SAMPLED BY:

## O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH3 - SS3	BH3 - SS7
		G / S	RDL	6182502	6182511
F1 (C6 to C10)	µg/g	25	5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5
F2 (C10 to C16)	µg/g	10	7	<7	<7
F3 (C16 to C34)	µg/g	240	50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA
Moisture Content	%		0.1	15.1	17.0
Surrogate	Unit	Acceptable Limits			
Toluene-d8	%	50-140		102	106
Terphenyl	%	60-140		70	72

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6182502-6182511** Results are based on sample dry weight.  
The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**

R. Chakraborty

# Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
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CANADA L4Z 1Y2  
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FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC  
SAMPLING SITE: Far Mile Creek Road

ATTENTION TO: Amanda Catenaro  
SAMPLED BY:

## O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH3 - SS3	BH3 - SS7
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-26	2024-09-26
		G / S	RDL	6182502	6182511
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05

Certified By:

R. Chakraborty

# Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
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CLIENT NAME: EXP SERVICES INC  
SAMPLING SITE: Far Mile Creek Road

ATTENTION TO: Amanda Catenaro  
SAMPLED BY:

## O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH3 - SS3	BH3 - SS7
		G / S	RDL	2024-09-26	2024-09-26
				6182502	6182511
Bromoform	ug/g	0.05	0.05	<0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05
Moisture Content	%		0.1	15.1	17.0
<b>Surrogate</b>	<b>Unit</b>	<b>Acceptable Limits</b>			
Toluene-d8	% Recovery	50-140		102	106
4-Bromofluorobenzene	% Recovery	50-140		84	80

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6182502-6182511** The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**

R. Chakraborty

## Quality Assurance

**CLIENT NAME:** EXP SERVICES INC  
**PROJECT:** GTR-24000672-C0-2  
**SAMPLING SITE:** Far Mile Creek Road

**AGAT WORK ORDER:** 24H202434  
**ATTENTION TO:** Amanda Catenaro  
**SAMPLED BY:**

Soil Analysis															
RPT Date: Oct 03, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - Metals & Inorganics (Soil)**

Antimony	6182534		<0.8	<0.8	NA	< 0.8	122%	70%	130%	99%	80%	120%	103%	70%	130%
Arsenic	6182534		1	1	NA	< 1	105%	70%	130%	95%	80%	120%	94%	70%	130%
Barium	6182534		75.9	63.3	18.1%	< 2.0	113%	70%	130%	107%	80%	120%	110%	70%	130%
Beryllium	6182534		<0.5	<0.5	NA	< 0.5	95%	70%	130%	102%	80%	120%	108%	70%	130%
Boron	6182534		<5	<5	NA	< 5	79%	70%	130%	83%	80%	120%	85%	70%	130%
Boron (Hot Water Soluble)	6182534		0.11	0.11	NA	< 0.10	98%	60%	140%	99%	70%	130%	107%	60%	140%
Cadmium	6182534		<0.5	<0.5	NA	< 0.5	102%	70%	130%	91%	80%	120%	102%	70%	130%
Chromium	6182534		13	12	NA	< 5	100%	70%	130%	100%	80%	120%	95%	70%	130%
Cobalt	6182534		3.7	3.9	NA	< 0.8	97%	70%	130%	97%	80%	120%	92%	70%	130%
Copper	6182534		16.5	15.1	8.9%	< 1.0	95%	70%	130%	100%	80%	120%	102%	70%	130%
Lead	6182534		3	3	NA	< 1	103%	70%	130%	97%	80%	120%	96%	70%	130%
Molybdenum	6182534		<0.5	<0.5	NA	< 0.5	109%	70%	130%	98%	80%	120%	107%	70%	130%
Nickel	6182534		7	7	0.0%	< 1	100%	70%	130%	98%	80%	120%	91%	70%	130%
Selenium	6182534		<0.8	<0.8	NA	< 0.8	83%	70%	130%	95%	80%	120%	96%	70%	130%
Silver	6182534		<0.5	<0.5	NA	< 0.5	104%	70%	130%	96%	80%	120%	100%	70%	130%
Thallium	6182534		<0.5	<0.5	NA	< 0.5	113%	70%	130%	101%	80%	120%	100%	70%	130%
Uranium	6182534		0.72	0.69	NA	< 0.50	106%	70%	130%	100%	80%	120%	102%	70%	130%
Vanadium	6182534		19.7	19.5	1.0%	< 2.0	106%	70%	130%	99%	80%	120%	99%	70%	130%
Zinc	6182534		15	17	NA	< 5	98%	70%	130%	93%	80%	120%	89%	70%	130%
Chromium, Hexavalent	6182757		<0.2	<0.2	NA	< 0.2	101%	70%	130%	97%	80%	120%	72%	70%	130%
Cyanide, WAD	6182763		<0.040	<0.040	NA	< 0.040	93%	70%	130%	102%	80%	120%	93%	70%	130%
Mercury	6182534		<0.10	<0.10	NA	< 0.10	103%	70%	130%	98%	80%	120%	100%	70%	130%
Electrical Conductivity (2:1)	6182534		0.311	0.311	0.0%	< 0.005	101%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	6182534		1.81	1.70	6.3%	NA									
pH, 2:1 CaCl2 Extraction	6182749		5.78	5.69	1.6%	NA	100%	80%	120%						

Comments: NA signifies Not Applicable.  
 pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.  
 Duplicate NA: results are under 5X the RDL and will not be calculated.

**Certified By:**



## Quality Assurance

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H202434**
**PROJECT: GTR-24000672-C0-2**
**ATTENTION TO: Amanda Catenaro**
**SAMPLING SITE: Far Mile Creek Road**
**SAMPLED BY:**

### Trace Organics Analysis

RPT Date: Oct 03, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - OC Pesticides (Soil)**

Hexachloroethane	6173173	< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	87%	50%	140%	106%	50%	140%
Gamma-Hexachlorocyclohexane	6173173	< 0.005	< 0.005	NA	< 0.005	102%	50%	140%	107%	50%	140%	103%	50%	140%
Heptachlor	6173173	< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	103%	50%	140%	112%	50%	140%
Aldrin	6173173	< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	90%	50%	140%	117%	50%	140%
Heptachlor Epoxide	6173173	< 0.005	< 0.005	NA	< 0.005	100%	50%	140%	105%	50%	140%	109%	50%	140%
Endosulfan I	6173173	< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	106%	50%	140%	104%	50%	140%
Endosulfan II	6173173	< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	109%	50%	140%	114%	50%	140%
Alpha-Chlordane	6173173	< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	108%	50%	140%	104%	50%	140%
gamma-Chlordane	6173173	< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	111%	50%	140%	106%	50%	140%
op'-DDE	6173173	< 0.005	< 0.005	NA	< 0.005	113%	50%	140%	106%	50%	140%	102%	50%	140%
pp'-DDE	6173173	< 0.005	< 0.005	NA	< 0.005	95%	50%	140%	112%	50%	140%	113%	50%	140%
op'-DDD	6173173	< 0.005	< 0.005	NA	< 0.005	114%	50%	140%	116%	50%	140%	109%	50%	140%
pp'-DDD	6173173	< 0.005	< 0.005	NA	< 0.005	101%	50%	140%	112%	50%	140%	108%	50%	140%
op'-DDT	6173173	< 0.005	< 0.005	NA	< 0.005	112%	50%	140%	114%	50%	140%	102%	50%	140%
pp'-DDT	6173173	< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	106%	50%	140%	103%	50%	140%
Dieldrin	6173173	< 0.005	< 0.005	NA	< 0.005	95%	50%	140%	101%	50%	140%	103%	50%	140%
Endrin	6173173	< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	102%	50%	140%	86%	50%	140%
Methoxychlor	6173173	< 0.005	< 0.005	NA	< 0.005	82%	50%	140%	117%	50%	140%	116%	50%	140%
Hexachlorobenzene	6173173	< 0.005	< 0.005	NA	< 0.005	105%	50%	140%	92%	50%	140%	108%	50%	140%
Hexachlorobutadiene	6173173	< 0.01	< 0.01	NA	< 0.01	107%	50%	140%	103%	50%	140%	105%	50%	140%

**O. Reg. 153(511) - PAHs (Soil)**

Naphthalene	6177080	<0.05	<0.05	NA	< 0.05	93%	50%	140%	90%	50%	140%	80%	50%	140%
Acenaphthylene	6177080	<0.05	<0.05	NA	< 0.05	88%	50%	140%	88%	50%	140%	78%	50%	140%
Acenaphthene	6177080	<0.05	<0.05	NA	< 0.05	84%	50%	140%	75%	50%	140%	80%	50%	140%
Fluorene	6177080	<0.05	<0.05	NA	< 0.05	81%	50%	140%	73%	50%	140%	73%	50%	140%
Phenanthrene	6177080	<0.05	<0.05	NA	< 0.05	85%	50%	140%	80%	50%	140%	85%	50%	140%
Anthracene	6177080	<0.05	<0.05	NA	< 0.05	71%	50%	140%	80%	50%	140%	83%	50%	140%
Fluoranthene	6177080	<0.05	<0.05	NA	< 0.05	85%	50%	140%	85%	50%	140%	80%	50%	140%
Pyrene	6177080	<0.05	<0.05	NA	< 0.05	84%	50%	140%	75%	50%	140%	75%	50%	140%
Benzo(a)anthracene	6177080	<0.05	<0.05	NA	< 0.05	76%	50%	140%	75%	50%	140%	75%	50%	140%
Chrysene	6177080	<0.05	<0.05	NA	< 0.05	107%	50%	140%	100%	50%	140%	85%	50%	140%
Benzo(b)fluoranthene	6177080	<0.05	<0.05	NA	< 0.05	90%	50%	140%	98%	50%	140%	83%	50%	140%
Benzo(k)fluoranthene	6177080	<0.05	<0.05	NA	< 0.05	115%	50%	140%	83%	50%	140%	80%	50%	140%
Benzo(a)pyrene	6177080	<0.05	<0.05	NA	< 0.05	101%	50%	140%	95%	50%	140%	98%	50%	140%
Indeno(1,2,3-cd)pyrene	6177080	<0.05	<0.05	NA	< 0.05	80%	50%	140%	83%	50%	140%	78%	50%	140%
Dibenz(a,h)anthracene	6177080	<0.05	<0.05	NA	< 0.05	73%	50%	140%	65%	50%	140%	68%	50%	140%
Benzo(g,h,i)perylene	6177080	<0.05	<0.05	NA	< 0.05	99%	50%	140%	75%	50%	140%	75%	50%	140%

**O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)**
**AGAT QUALITY ASSURANCE REPORT (V1)**

Page 11 of 19

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

*Results relate only to the items tested. Results apply to samples as received.*

## Quality Assurance

**CLIENT NAME:** EXP SERVICES INC  
**PROJECT:** GTR-24000672-C0-2  
**SAMPLING SITE:** Far Mile Creek Road

**AGAT WORK ORDER:** 24H202434  
**ATTENTION TO:** Amanda Catenaro  
**SAMPLED BY:**

### Trace Organics Analysis (Continued)

RPT Date: Oct 03, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
F1 (C6 to C10)	6181262		<5	<5	NA	< 5	127%	60%	140%	119%	60%	140%	84%	60%	140%	
F2 (C10 to C16)	6177080		< 10	< 10	NA	< 7	117%	60%	140%	106%	60%	140%	106%	60%	140%	
F3 (C16 to C34)	6177080		< 50	< 50	NA	< 50	117%	60%	140%	123%	60%	140%	123%	60%	140%	
F4 (C34 to C50)	6177080		< 50	< 50	NA	< 50	83%	60%	140%	98%	60%	140%	118%	60%	140%	
<b>O. Reg. 153(511) - VOCs (with PHC) (Soil)</b>																
Dichlorodifluoromethane	6181262		<0.05	<0.05	NA	< 0.05	101%	50%	140%	84%	50%	140%	89%	50%	140%	
Vinyl Chloride	6181262		<0.02	<0.02	NA	< 0.02	110%	50%	140%	92%	50%	140%	114%	50%	140%	
Bromomethane	6181262		<0.05	<0.05	NA	< 0.05	126%	50%	140%	92%	50%	140%	114%	50%	140%	
Trichlorofluoromethane	6181262		<0.05	<0.05	NA	< 0.05	101%	50%	140%	92%	50%	140%	102%	50%	140%	
Acetone	6181262		<0.50	<0.50	NA	< 0.50	87%	50%	140%	128%	50%	140%	97%	50%	140%	
1,1-Dichloroethylene	6181262		<0.05	<0.05	NA	< 0.05	71%	50%	140%	103%	60%	130%	94%	50%	140%	
Methylene Chloride	6181262		<0.05	<0.05	NA	< 0.05	71%	50%	140%	95%	60%	130%	99%	50%	140%	
Trans- 1,2-Dichloroethylene	6181262		<0.05	<0.05	NA	< 0.05	75%	50%	140%	101%	60%	130%	95%	50%	140%	
Methyl tert-butyl Ether	6181262		<0.05	<0.05	NA	< 0.05	71%	50%	140%	104%	60%	130%	109%	50%	140%	
1,1-Dichloroethane	6181262		<0.02	<0.02	NA	< 0.02	61%	50%	140%	72%	60%	130%	107%	50%	140%	
Methyl Ethyl Ketone	6181262		<0.50	<0.50	NA	< 0.50	86%	50%	140%	101%	50%	140%	114%	50%	140%	
Cis- 1,2-Dichloroethylene	6181262		<0.02	<0.02	NA	< 0.02	96%	50%	140%	88%	60%	130%	97%	50%	140%	
Chloroform	6181262		<0.04	<0.04	NA	< 0.04	100%	50%	140%	104%	60%	130%	105%	50%	140%	
1,2-Dichloroethane	6181262		<0.03	<0.03	NA	< 0.03	97%	50%	140%	103%	60%	130%	89%	50%	140%	
1,1,1-Trichloroethane	6181262		<0.05	<0.05	NA	< 0.05	91%	50%	140%	101%	60%	130%	96%	50%	140%	
Carbon Tetrachloride	6181262		<0.05	<0.05	NA	< 0.05	79%	50%	140%	97%	60%	130%	92%	50%	140%	
Benzene	6181262		<0.02	<0.02	NA	< 0.02	84%	50%	140%	97%	60%	130%	98%	50%	140%	
1,2-Dichloropropane	6181262		<0.03	<0.03	NA	< 0.03	88%	50%	140%	103%	60%	130%	100%	50%	140%	
Trichloroethylene	6181262		<0.03	<0.03	NA	< 0.03	76%	50%	140%	93%	60%	130%	103%	50%	140%	
Bromodichloromethane	6181262		<0.05	<0.05	NA	< 0.05	84%	50%	140%	91%	60%	130%	90%	50%	140%	
Methyl Isobutyl Ketone	6181262		<0.50	<0.50	NA	< 0.50	73%	50%	140%	97%	50%	140%	83%	50%	140%	
1,1,2-Trichloroethane	6181262		<0.04	<0.04	NA	< 0.04	101%	50%	140%	101%	60%	130%	105%	50%	140%	
Toluene	6181262		<0.05	<0.05	NA	< 0.05	91%	50%	140%	100%	60%	130%	101%	50%	140%	
Dibromochloromethane	6181262		<0.05	<0.05	NA	< 0.05	85%	50%	140%	97%	60%	130%	89%	50%	140%	
Ethylene Dibromide	6181262		<0.04	<0.04	NA	< 0.04	91%	50%	140%	105%	60%	130%	98%	50%	140%	
Tetrachloroethylene	6181262		<0.05	<0.05	NA	< 0.05	81%	50%	140%	99%	60%	130%	100%	50%	140%	
1,1,1,2-Tetrachloroethane	6181262		<0.04	<0.04	NA	< 0.04	86%	50%	140%	97%	60%	130%	88%	50%	140%	
Chlorobenzene	6181262		<0.05	<0.05	NA	< 0.05	87%	50%	140%	99%	60%	130%	99%	50%	140%	
Ethylbenzene	6181262		<0.05	<0.05	NA	< 0.05	77%	50%	140%	88%	60%	130%	98%	50%	140%	
m & p-Xylene	6181262		<0.05	<0.05	NA	< 0.05	75%	50%	140%	87%	60%	130%	97%	50%	140%	
Bromoform	6181262		<0.05	<0.05	NA	< 0.05	100%	50%	140%	101%	60%	130%	99%	50%	140%	
Styrene	6181262		<0.05	<0.05	NA	< 0.05	60%	50%	140%	74%	60%	130%	79%	50%	140%	
1,1,2,2-Tetrachloroethane	6181262		<0.05	<0.05	NA	< 0.05	101%	50%	140%	104%	60%	130%	93%	50%	140%	
o-Xylene	6181262		<0.05	<0.05	NA	< 0.05	81%	50%	140%	92%	60%	130%	98%	50%	140%	

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Far Mile Creek Road

SAMPLED BY:

### Trace Organics Analysis (Continued)

RPT Date: Oct 03, 2024

DUPLICATE

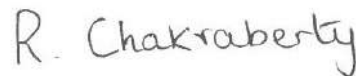
REFERENCE MATERIAL

METHOD BLANK SPIKE

MATRIX SPIKE

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	6181262		<0.05	<0.05	NA	< 0.05	85%	50%	140%	98%	60%	130%	97%	50%	140%
1,4-Dichlorobenzene	6181262		<0.05	<0.05	NA	< 0.05	86%	50%	140%	97%	60%	130%	101%	50%	140%
1,2-Dichlorobenzene	6181262		<0.05	<0.05	NA	< 0.05	87%	50%	140%	95%	60%	130%	98%	50%	140%
n-Hexane	6181262		<0.05	<0.05	NA	< 0.05	65%	50%	140%	72%	60%	130%	73%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

**Certified By:**


## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Far Mile Creek Road

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Soil Analysis</b>			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Far Mile Creek Road

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Trace Organics Analysis</b>			
Hexachloroethane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
Alpha-Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
op'-DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
op'-DDT	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDT (Total)	ORG-91-5113	modified from EPA 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
TCMX	ORG-91-5112	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE

## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Far Mile Creek Road

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
wet weight OC	ORG-91-5113		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Far Mile Creek Road

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H202434**
**PROJECT: GTR-24000672-C0-2**
**ATTENTION TO: Amanda Catenaro**
**SAMPLING SITE: Far Mile Creek Road**
**SAMPLED BY:**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

Have feedback?  
Scan here for a quick survey!



5835 Coopers Avenue  
Mississauga, Ontario L4Z 1Y2  
Ph: 905.712.5100 Fax: 905.712.5122  
webearth.agatlabs.com

### Laboratory Use Only

Work Order #: 2411202434  
Cooler Quantity: MD COOLER  
Arrival Temperatures: 1.8 | 1.9 | 2.3  
Depot Temperatures: 3.0 | 3.3 | 3.1  
Custody Seal Intact:  Yes  No  N/A  
Notes: LOOSE ICE

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information

Company: EXP Services Inc.  
Contact: Amanda Cafenaro  
Address: 220th Commerce Valley Dr. West  
Suite 110, Markham ON  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: Amanda.Cafenaro@exp.com  
2. Email: Jamesyn.Patterson@exp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Regulation 406  Sewer Use  
 Sanitary  Storm

Table 1 Indicate One  Ind/Com  Res/Park  Agriculture  
Soil Texture (Check One)  Coarse  Fine  Regulation 558  CCME

Region \_\_\_\_\_  
 Prov. Water Quality Objectives (PWQO)  Other

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days  
Rush TAT (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

### Project Information:

Project: GIR-2400672ED-2  
Site Location: Fair Mile Creek Road, NOTL, ON  
Sampled By: \_\_\_\_\_  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

### Is this submission for a Record of Site Condition (RSC)?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays  
For 'Same Day' analysis, please contact your AGAT CSR

### Invoice Information:

Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: \_\_\_\_\_  
Bill To Same: Yes  No

### Legal Sample

### Sample Matrix Legend

GW Ground Water SD Sediment  
O Oil SW Surface Water  
P Paint R Rock/Shale  
S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Analysis Parameters														
							Metals & Inorganics	Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB	BTEX, F1-F4	VOC	PAHS	PCBS: Aroclors <input type="checkbox"/>	Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SMLP Rainwater Leach mSPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs <input type="checkbox"/> OC	Landfill Disposal Characterization TCLP: TCLP: <input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNs <input type="checkbox"/> BtaP <input type="checkbox"/> PCBs	Corrosivity: <input type="checkbox"/> Moisture <input type="checkbox"/> Sulphide	OC Pesticides	Potentially Hazardous or High Concentration (Y/N)		
1. BH3-SS1	Sept. 26	AM	1	S			X														
2. BH3-SS2		AM	1																		
3. BH3-SS4		AM	1		HOLD																
4. BH3-SS5		AM	1		HOLD		X														
5. BH3-SS3		AM	3																		
6. BH3-SS7		AM	3																		
7. BH3-SS8		AM	3		HOLD																
8. BH1-SS2	Sept. 25	AM	1																		
9. BH1-SS7		AM	1		HOLD additional sample																
10. BH5-SS2		AM	1																		
11. BH5-SS7		AM	1		HOLD additional sample																

Samples Relinquished By (Print Name and Sign): <u>James Patterson</u>	Date: <u>2:45</u> Time: <u>Sept. 27</u>	Samples Received By (Print Name and Sign): <u>ATAC</u>	Date: <u>Sept 27/24</u> Time: <u>2:45 PM</u>
Samples Relinquished By (Print Name and Sign): <u>ATAC</u>	Date: <u>Sept 27/24</u> Time: <u>3 PM</u>	Samples Received By (Print Name and Sign): <u>AB</u>	Date: <u>27.09</u> Time: <u>10.40</u>
Samples Relinquished By (Print Name and Sign):	Date:	Samples Received By (Print Name and Sign):	Date:

Page 1 of 1  
N#: T-160314

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

**CLIENT NAME: EXP SERVICES INC**  
**220 Commerce Valley Drive West, Suite 500**  
**Markham, ON, ON L3T0A8**  
**(905) 695-3217**

**ATTENTION TO: Jon Charles**

**PROJECT: GTR-24000672-C0-2**

**AGAT WORK ORDER: 24H204750**

**TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist**

**WATER ANALYSIS REVIEWED BY: Yris Verastegui, Inorganic Team Lead**

**DATE REPORTED: Oct 10, 2024**

**PAGES (INCLUDING COVER): 19**

**VERSION\*: 1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

**\*Notes**

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

# Certificate of Analysis

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544-1546 Four Mile Creek Rd., NOTL

ATTENTION TO: Jon Charles

SAMPLED BY: JP

## O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:	BH4	BH1-23	BH2-23	BH5-23	BH5-23-0
				SAMPLE TYPE:	Water	Water	Water	Water	Water
				DATE SAMPLED:	2024-10-02	2024-10-02	2024-10-02 12:00	2024-10-02 12:00	2024-10-02
				6194080	6194108	6194109	6194111	6194131	
Naphthalene	µg/L	7	0.20	0.44	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	0.22	0.22	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	0.1	0.10	<b>0.22</b>	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	0.1	0.10	<b>0.11</b>	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.4	0.20	0.33	<0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	0.2	0.20	<b>0.22</b>	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<b>0.11</b>	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	2	0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.20
Sediment				3	1	1	1	1	
Surrogate	Unit	Acceptable Limits							
Naphthalene-d8	%	50-140			112	116	109	95	91
Acridine-d9	%	50-140			90	85	91	82	70
Terphenyl-d14	%	50-140			96	93	90	86	76

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6194080-6194131** Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Jon Charles

SAMPLING SITE: 1544-1546 Four Mile Creek Rd., NOTL

SAMPLED BY: JP

## O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH4	BH1-23	BH2-23	BH5-23	BH5-23-0
		G / S	RDL	Water	Water	Water	Water	Water
		DATE SAMPLED:		2024-10-02	2024-10-02	2024-10-02	2024-10-02	2024-10-02
				12:00	12:00	12:00	12:00	12:00
				6194080	6194108	6194109	6194111	6194131
F1 (C6 to C10)	µg/L	420	25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA	NA	NA
Sediment				3	1	1	1	1
Surrogate	Unit	Acceptable Limits						
Toluene-d8	%	50-140		113	112	104	107	110
Terphenyl	% Recovery	60-140		85	79	85	75	72

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6194080-6194131** The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.  
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
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FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE:1544-1546 Four Mile Creek Rd., NOTL

ATTENTION TO: Jon Charles

SAMPLED BY:JP

## O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		6194133
		G / S	RDL	
Dichlorodifluoromethane	µg/L	590	0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

 5835 COOPERS AVENUE  
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 FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544-1546 Four Mile Creek Rd., NOTL

ATTENTION TO: Jon Charles

SAMPLED BY: JP

## O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		Trip Blank
		G / S	RDL	6194133
Bromoform	µg/L	5	0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10
o-Xylene	µg/L		0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		108
4-Bromofluorobenzene	% Recovery	50-140		100

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6194133**  
 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
 1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
 The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**


# Certificate of Analysis

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Jon Charles

SAMPLING SITE: 1544-1546 Four Mile Creek Rd., NOTL

SAMPLED BY: JP

## O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH4	BH1-23	BH2-23	BH5-23	BH5-23-0
		G / S	RDL	Water	Water	Water	Water	Water
		DATE SAMPLED:		2024-10-02	2024-10-02	2024-10-02 12:00	2024-10-02 12:00	2024-10-02
				6194080	6194108	6194109	6194111	6194131
Dichlorodifluoromethane	µg/L	590	0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<b>0.81</b>	<0.10	<0.10	<0.10	<0.10

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
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CANADA L4Z 1Y2  
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<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544-1546 Four Mile Creek Rd., NOTL

ATTENTION TO: Jon Charles

SAMPLED BY: JP

### O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:				
				BH4	BH1-23	BH2-23	BH5-23	BH5-23-0
				Water	Water	Water	Water	Water
				2024-10-02	2024-10-02	2024-10-02	2024-10-02	2024-10-02
				12:00	12:00	12:00	12:00	12:00
Surrogate	Unit	Acceptable Limits		6194080	6194108	6194109	6194111	6194131
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene-d8	% Recovery	50-140		113	112	104	107	110
4-Bromofluorobenzene	% Recovery	50-140		110	110	101	101	106

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6194080-6194131** Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
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<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE:1544-1546 Four Mile Creek Rd., NOTL

ATTENTION TO: Jon Charles

SAMPLED BY:JP

## O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH4	BH1-23	BH2-23	BH5-23	BH5-23-0	
		G / S	RDL	Water	Water	Water	Water	Water	
		DATE SAMPLED:	DATE SAMPLED:	2024-10-02	2024-10-02	2024-10-02 12:00	2024-10-02 12:00	2024-10-02	
				6194080	6194108	RDL	6194109	6194111	6194131
Dissolved Antimony	µg/L	1.5	1.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	13	1.0	11.6	3.7	1.0	1.1	1.2	<1.0
Dissolved Barium	µg/L	610	2.0	159	70.9	2.0	27.7	33.8	31.5
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	<0.50	0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	1700	10.0	119	65.0	10.0	431	256	257
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	<0.20	0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	<2.0	2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	<0.50	<0.50	0.50	<0.50	<b>4.43</b>	<b>5.06</b>
Dissolved Copper	µg/L	5	1.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0
Dissolved Lead	µg/L	1.9	0.50	<0.50	<0.50	0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	23	0.50	6.83	12.0	0.50	15.7	4.70	8.37
Dissolved Nickel	µg/L	14	1.0	1.9	1.5	1.0	2.3	<b>14.9</b>	11.5
Dissolved Selenium	µg/L	5	1.0	<1.0	<1.0	1.0	3.4	<b>5.3</b>	3.2
Dissolved Silver	µg/L	0.3	0.20	<0.20	<0.20	0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	<0.30	0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	0.88	<0.50	0.50	<b>13.7</b>	<b>27.9</b>	<b>27.6</b>
Dissolved Vanadium	µg/L	3.9	0.40	<0.40	<0.40	0.40	1.57	0.50	<0.40
Dissolved Zinc	µg/L	160	5.0	<5.0	<5.0	5.0	<5.0	<5.0	<5.0
Mercury	µg/L	0.1	0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	2.000	<2.000	<2.000	2.000	<2.000	<2.000	<2.000
Cyanide, WAD	µg/L	5	2	<2	<2	2	<2	<2	<2
Dissolved Sodium	µg/L	490000	50	29000	14100	50	230000	327000	339000
Chloride	µg/L	790000	100	16800	30000	122	169000	315000	319000
Electrical Conductivity	µS/cm	NA	2	851	565	2	4210	6680	6720
pH	pH Units		NA	7.43	7.70	NA	7.50	7.29	7.31

**Certified By:**

*Jris Verastegui*



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
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CANADA L4Z 1Y2  
TEL (905)712-5100  
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<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE:1544-1546 Four Mile Creek Rd., NOTL

ATTENTION TO: Jon Charles

SAMPLED BY:JP

## O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6194080-6194131** Metals analysis completed on a filtered sample.

pH is a recommended field analysis taken within 15 minutes of sample collection. Due to the potential for rapid change in sample equilibrium chemistry laboratory results may differ from field measured results

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



## Exceedance Summary

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Jon Charles

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6194080	BH4	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Anthracene	µg/L	0.1	0.11
6194080	BH4	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Chrysene	µg/L	0.1	0.11
6194080	BH4	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Phenanthrene	µg/L	0.1	0.22
6194080	BH4	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Pyrene	µg/L	0.2	0.22
6194080	BH4	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Ethylbenzene	µg/L	0.5	0.81
6194080	BH4	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Phenanthrene	µg/L	0.1	0.22
6194080	BH4	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Pyrene	µg/L	0.2	0.22
6194080	BH4	ON T1 GW	O. Reg. 153(511) - VOCs (with PHC) (Water)	Ethylbenzene	µg/L	0.5	0.81
6194109	BH2-23	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Uranium	µg/L	8.9	13.7
6194111	BH5-23	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Cobalt	µg/L	3.8	4.43
6194111	BH5-23	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Nickel	µg/L	14	14.9
6194111	BH5-23	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Selenium	µg/L	5	5.3
6194111	BH5-23	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Uranium	µg/L	8.9	27.9
6194131	BH5-23-0	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Cobalt	µg/L	3.8	5.06
6194131	BH5-23-0	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Uranium	µg/L	8.9	27.6

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Jon Charles

SAMPLING SITE:1544-1546 Four Mile Creek Rd., NOTL

SAMPLED BY:JP

### Trace Organics Analysis

RPT Date: Oct 10, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

**O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)**

F1 (C6 to C10)	6194080	6194080	< 25	< 25	NA	< 25	93%	60%	140%	81%	60%	140%	84%	60%	140%
F2 (C10 to C16)	6191019		< 100	< 100	NA	< 100	89%	60%	140%	93%	60%	140%	71%	60%	140%
F3 (C16 to C34)	6191019		< 100	< 100	NA	< 100	108%	60%	140%	97%	60%	140%	79%	60%	140%
F4 (C34 to C50)	6191019		< 100	< 100	NA	< 100	83%	60%	140%	80%	60%	140%	91%	60%	140%

**O. Reg. 153(511) - PAHs (Water)**

Naphthalene	6192713		1.00	1.00	NA	< 0.20	89%	50%	140%	81%	50%	140%	63%	50%	140%
Acenaphthylene	6192713		<0.20	<0.20	NA	< 0.20	88%	50%	140%	76%	50%	140%	67%	50%	140%
Acenaphthene	6192713		<0.20	<0.20	NA	< 0.20	84%	50%	140%	79%	50%	140%	73%	50%	140%
Fluorene	6192713		<0.20	<0.20	NA	< 0.20	86%	50%	140%	80%	50%	140%	76%	50%	140%
Phenanthrene	6192713		<0.10	<0.10	NA	< 0.10	90%	50%	140%	82%	50%	140%	79%	50%	140%
Anthracene	6192713		<0.10	<0.10	NA	< 0.10	71%	50%	140%	87%	50%	140%	78%	50%	140%
Fluoranthene	6192713		<0.20	<0.20	NA	< 0.20	94%	50%	140%	86%	50%	140%	81%	50%	140%
Pyrene	6192713		<0.20	<0.20	NA	< 0.20	91%	50%	140%	84%	50%	140%	79%	50%	140%
Benzo(a)anthracene	6192713		<0.20	<0.20	NA	< 0.20	105%	50%	140%	91%	50%	140%	91%	50%	140%
Chrysene	6192713		<0.10	<0.10	NA	< 0.10	106%	50%	140%	99%	50%	140%	93%	50%	140%
Benzo(b)fluoranthene	6192713		<0.10	<0.10	NA	< 0.10	91%	50%	140%	81%	50%	140%	102%	50%	140%
Benzo(k)fluoranthene	6192713		<0.10	<0.10	NA	< 0.10	93%	50%	140%	86%	50%	140%	95%	50%	140%
Benzo(a)pyrene	6192713		<0.01	<0.01	NA	< 0.01	91%	50%	140%	75%	50%	140%	85%	50%	140%
Indeno(1,2,3-cd)pyrene	6192713		<0.20	<0.20	NA	< 0.20	105%	50%	140%	83%	50%	140%	109%	50%	140%
Dibenz(a,h)anthracene	6192713		<0.20	<0.20	NA	< 0.20	97%	50%	140%	78%	50%	140%	108%	50%	140%
Benzo(g,h,i)perylene	6192713		<0.20	<0.20	NA	< 0.20	110%	50%	140%	88%	50%	140%	97%	50%	140%

**O. Reg. 153(511) - VOCs (with PHC) (Water)**

Dichlorodifluoromethane	6194080	6194080	< 0.40	< 0.40	NA	< 0.40	92%	50%	140%	106%	50%	140%	74%	50%	140%
Vinyl Chloride	6194080	6194080	< 0.17	< 0.17	NA	< 0.17	114%	50%	140%	105%	50%	140%	107%	50%	140%
Bromomethane	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	112%	50%	140%	115%	50%	140%	115%	50%	140%
Trichlorofluoromethane	6194080	6194080	< 0.40	< 0.40	NA	< 0.40	106%	50%	140%	75%	50%	140%	103%	50%	140%
Acetone	6194080	6194080	< 1.0	< 1.0	NA	< 1.0	115%	50%	140%	98%	50%	140%	77%	50%	140%
1,1-Dichloroethylene	6194080	6194080	< 0.30	< 0.30	NA	< 0.30	73%	50%	140%	70%	60%	130%	89%	50%	140%
Methylene Chloride	6194080	6194080	< 0.30	< 0.30	NA	< 0.30	116%	50%	140%	111%	60%	130%	119%	50%	140%
trans- 1,2-Dichloroethylene	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	63%	50%	140%	68%	60%	130%	70%	50%	140%
Methyl tert-butyl ether	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	92%	50%	140%	105%	60%	130%	99%	50%	140%
1,1-Dichloroethane	6194080	6194080	< 0.30	< 0.30	NA	< 0.30	83%	50%	140%	89%	60%	130%	73%	50%	140%
Methyl Ethyl Ketone	6194080	6194080	< 1.0	< 1.0	NA	< 1.0	103%	50%	140%	114%	50%	140%	76%	50%	140%
cis- 1,2-Dichloroethylene	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	71%	50%	140%	62%	60%	130%	72%	50%	140%
Chloroform	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	61%	50%	140%	60%	60%	130%	73%	50%	140%
1,2-Dichloroethane	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	77%	50%	140%	64%	60%	130%	75%	50%	140%
1,1,1-Trichloroethane	6194080	6194080	< 0.30	< 0.30	NA	< 0.30	90%	50%	140%	60%	60%	130%	65%	50%	140%
Carbon Tetrachloride	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	61%	50%	140%	63%	60%	130%	67%	50%	140%

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Jon Charles

SAMPLING SITE: 1544-1546 Four Mile Creek Rd., NOTL

SAMPLED BY: JP

### Trace Organics Analysis (Continued)

RPT Date: Oct 10, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Benzene	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	64%	50%	140%	66%	60%	130%	84%	50%	140%	
1,2-Dichloropropane	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	64%	50%	140%	69%	60%	130%	84%	50%	140%	
Trichloroethylene	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	66%	50%	140%	72%	60%	130%	83%	50%	140%	
Bromodichloromethane	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	91%	50%	140%	62%	60%	130%	66%	50%	140%	
Methyl Isobutyl Ketone	6194080	6194080	< 1.0	< 1.0	NA	< 1.0	118%	50%	140%	109%	50%	140%	116%	50%	140%	
1,1,2-Trichloroethane	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	89%	50%	140%	88%	60%	130%	111%	50%	140%	
Toluene	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	75%	50%	140%	69%	60%	130%	100%	50%	140%	
Dibromochloromethane	6194080	6194080	< 0.10	< 0.10	NA	< 0.10	62%	50%	140%	63%	60%	130%	69%	50%	140%	
Ethylene Dibromide	6194080	6194080	< 0.10	< 0.10	NA	< 0.10	80%	50%	140%	83%	60%	130%	98%	50%	140%	
Tetrachloroethylene	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	78%	50%	140%	68%	60%	130%	99%	50%	140%	
1,1,1,2-Tetrachloroethane	6194080	6194080	< 0.10	< 0.10	NA	< 0.10	68%	50%	140%	68%	60%	130%	83%	50%	140%	
Chlorobenzene	6194080	6194080	< 0.10	< 0.10	NA	< 0.10	80%	50%	140%	73%	60%	130%	101%	50%	140%	
Ethylbenzene	6194080	6194080	0.81	0.80	1.2%	< 0.10	77%	50%	140%	70%	60%	130%	100%	50%	140%	
m & p-Xylene	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	81%	50%	140%	74%	60%	130%	106%	50%	140%	
Bromoform	6194080	6194080	< 0.10	< 0.10	NA	< 0.10	57%	50%	140%	69%	60%	130%	57%	50%	140%	
Styrene	6194080	6194080	< 0.10	< 0.10	NA	< 0.10	85%	50%	140%	79%	60%	130%	104%	50%	140%	
1,1,2,2-Tetrachloroethane	6194080	6194080	< 0.10	< 0.10	NA	< 0.10	87%	50%	140%	82%	60%	130%	106%	50%	140%	
o-Xylene	6194080	6194080	< 0.10	< 0.10	NA	< 0.10	83%	50%	140%	77%	60%	130%	111%	50%	140%	
1,3-Dichlorobenzene	6194080	6194080	< 0.10	< 0.10	NA	< 0.10	82%	50%	140%	73%	60%	130%	105%	50%	140%	
1,4-Dichlorobenzene	6194080	6194080	< 0.10	< 0.10	NA	< 0.10	82%	50%	140%	72%	60%	130%	103%	50%	140%	
1,2-Dichlorobenzene	6194080	6194080	< 0.10	< 0.10	NA	< 0.10	82%	50%	140%	74%	60%	130%	103%	50%	140%	
n-Hexane	6194080	6194080	< 0.20	< 0.20	NA	< 0.20	78%	50%	140%	75%	60%	130%	69%	50%	140%	

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

**Certified By:** \_\_\_\_\_



## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

ATTENTION TO: Jon Charles

SAMPLING SITE:1544-1546 Four Mile Creek Rd., NOTL

SAMPLED BY:JP

Water Analysis															
RPT Date: Oct 10, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - Metals & Inorganics (Water)**

Dissolved Antimony	6192600		16.9	17.7	4.6%	< 1.0	106%	70%	130%	108%	80%	120%	111%	70%	130%
Dissolved Arsenic	6192600		16.2	18.0	10.5%	< 1.0	93%	70%	130%	103%	80%	120%	108%	70%	130%
Dissolved Barium	6192600		43.5	43.3	0.5%	< 2.0	102%	70%	130%	100%	80%	120%	105%	70%	130%
Dissolved Beryllium	6192600		<0.50	<0.50	NA	< 0.50	99%	70%	130%	119%	80%	120%	112%	70%	130%
Dissolved Boron	6192600		24.6	22.0	NA	< 10.0	100%	70%	130%	117%	80%	120%	104%	70%	130%
Dissolved Cadmium	6192600		0.51	<0.20	NA	< 0.20	100%	70%	130%	105%	80%	120%	115%	70%	130%
Dissolved Chromium	6192600		<2.0	<2.0	NA	< 2.0	97%	70%	130%	109%	80%	120%	108%	70%	130%
Dissolved Cobalt	6192600		<0.50	<0.50	NA	< 0.50	104%	70%	130%	103%	80%	120%	106%	70%	130%
Dissolved Copper	6192600		290	265	9.0%	< 1.0	101%	70%	130%	100%	80%	120%	102%	70%	130%
Dissolved Lead	6192600		<0.50	<0.50	NA	< 0.50	100%	70%	130%	99%	80%	120%	93%	70%	130%
Dissolved Molybdenum	6192600		2910	2870	1.4%	< 0.50	108%	70%	130%	124%	80%	120%	112%	70%	130%
Dissolved Nickel	6192600		2.7	<1.0	NA	< 1.0	106%	70%	130%	100%	80%	120%	110%	70%	130%
Dissolved Selenium	6192600		2.0	1.9	NA	< 1.0	100%	70%	130%	103%	80%	120%	109%	70%	130%
Dissolved Silver	6192600		<0.20	<0.20	NA	< 0.20	107%	70%	130%	118%	80%	120%	113%	70%	130%
Dissolved Thallium	6192600		<0.30	<0.30	NA	< 0.30	100%	70%	130%	102%	80%	120%	92%	70%	130%
Dissolved Uranium	6192600		1.77	1.90	NA	< 0.50	102%	70%	130%	98%	80%	120%	96%	70%	130%
Dissolved Vanadium	6192600		0.50	0.96	NA	< 0.40	107%	70%	130%	111%	80%	120%	112%	70%	130%
Dissolved Zinc	6192600		11.7	33.2	NA	< 5.0	101%	70%	130%	98%	80%	120%	107%	70%	130%
Mercury	6194080	6194080	<0.02	<0.02	NA	< 0.02	102%	70%	130%	96%	80%	120%	93%	70%	130%
Chromium VI	6185140		<2.000	<2.000	NA	< 2	101%	70%	130%	107%	80%	120%	97%	70%	130%
Cyanide, WAD	6194080	6194080	<2	<2	NA	< 2	93%	70%	130%	89%	80%	120%	107%	70%	130%
Dissolved Sodium	6192600		<500	3310	NA	< 50	103%	70%	130%	117%	80%	120%	101%	70%	130%
Chloride	6194109	6194109	169000	171000	1.2%	< 100	96%	70%	130%	102%	80%	120%	101%	70%	130%
Electrical Conductivity	6194080	6194080	851	854	0.4%	< 2	105%	90%	110%						
pH	6194080	6194080	7.43	7.55	1.6%	NA	99%	90%	110%						

Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

QA Qualifier for metals – Dissolved Molybdenum: For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.

**Certified By:**

*José Verástegui*

## QC Exceedance

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H204750**
**PROJECT: GTR-24000672-C0-2**
**ATTENTION TO: Jon Charles**

RPT Date: Oct 10, 2024		REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - Metals & Inorganics (Water)**

Dissolved Molybdenum	108%	70%	130%	124%	80%	120%	112%	70%	130%
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Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

QA Qualifier for metals – Dissolved Molybdenum: For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.

## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H204750**
**PROJECT: GTR-24000672-C0-2**
**ATTENTION TO: Jon Charles**
**SAMPLING SITE:1544-1546 Four Mile Creek Rd., NOTL**
**SAMPLED BY:JP**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Trace Organics Analysis</b>			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
F1 (C6 to C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H204750**
**PROJECT: GTR-24000672-C0-2**
**ATTENTION TO: Jon Charles**
**SAMPLING SITE:1544-1546 Four Mile Creek Rd., NOTL**
**SAMPLED BY:JP**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H204750**
**PROJECT: GTR-24000672-C0-2**
**ATTENTION TO: Jon Charles**
**SAMPLING SITE: 1544-1546 Four Mile Creek Rd., NOTL**
**SAMPLED BY: JP**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

**CLIENT NAME:** EXP SERVICES INC

**AGAT WORK ORDER:** 24H204750

**PROJECT:** GTR-24000672-C0-2

**ATTENTION TO:** Jon Charles

**SAMPLING SITE:**1544-1546 Four Mile Creek Rd., NOTL

**SAMPLED BY:**JP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Water Analysis</b>			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Dissolved Sodium Chloride	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP/MS
Electrical Conductivity	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
pH	INOR-93-6000	SM 2510 B	PC TITRATE
	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE



### Laboratory Use Only

Work Order #: 244 204750  
Cooler Quantity: LOS COOLER  
Arrival Temperatures: 4.9 | 5.0 | 5.3  
Depot Temperatures: 12.2 | 12.0 | 11.9  
Custody Seal Intact:  Yes  No  N/A  
Notes: LOOSE ICE

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**  
Company: EXP Services Inc.  
Contact: Amanda Catenaro  
Address: 220 Commercial Valley Dr. W. Suite 110  
Markham ON  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: Amanda.catenaro@exp.com  
2. Email: Jamesyn Patterson@exp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Regulation 406  
 Sewer Use  
 Sanitary  Storm  
 Region \_\_\_\_\_  
 Prov. Water Quality Objectives (PWQO)  
 Other \_\_\_\_\_  
 Table Indicate One  
 Ind/Corn  Res/Park  Agriculture  
 Res/Park  Agriculture  
 Soil Texture (Check One)  
 Coarse  Regulation 558  
 Fine  CCME  
Indicate One

**Project Information:**  
Project: GTR-24000672-00-2  
Site Location: 1544-1546 Fox mile Creek Rd, NOTL  
Sampled By: JP  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: if quotation number is not provided, client will be billed full price for analysis.

Is this submission for a Record of Site Condition (RSC)?  
 Yes  No

Report Guideline on Certificate of Analysis  
 Yes  No

**Invoice Information:** Bill To Same: Yes  No   
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: \_\_\_\_\_

### Legal Sample

### Sample Matrix Legend

GW Ground Water SD Sediment  
O Oil SW Surface Water  
P Paint R Rock/Shale  
S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N	Field Filtered - Metals, Hg, CrVI, DOC															
							Metals & Inorganics	Metals - <input type="checkbox"/> CrVI <input type="checkbox"/> Hg <input type="checkbox"/> HWSB	BTEX, F1-F4 PHCS	VOC	PAHS	PCBs, Aroclors <input type="checkbox"/>	Regulation 406 Characterization Package: pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach mSPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs <input type="checkbox"/> DC	Landfill Disposal Characterization TCLP: <input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNs <input type="checkbox"/> BtaP <input type="checkbox"/> PCBs	Corrosivity: <input type="checkbox"/> Moisture <input type="checkbox"/> Sulphide	Potentially Hazardous or High Concentration (Y/N)				
1. BH4	Oct 2/24	AM	13	GW		Y	X		X	X	X											
2. BH1-23	↓	AM	13	↓		↓	X		X	X	X											
3. BH2-23	↓	PM	13	↓		↓	X		X	X	X											
4. BH5-23	↓	PM	13	↓		↓	X		X	X	X											
5. BH5-23-0	↓	PM	13	↓		↓	X		X	X	X											
6. Trip Blank		PM	3								X											
7.		PM																				
8.		PM																				
9.		PM																				
10.		PM																				
11.		PM																				

Samples Relinquished By (Print Name and Sign): <u>James Patterson JP</u>	Date: <u>Oct 2/24</u> Time: <u>4:30pm</u>	Samples Received By (Print Name and Sign): <u>DJHC [Signature]</u>	Date: <u>Oct 2/24</u> Time: <u>4:30pm</u>
Samples Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: <u>Oct 3/24</u> Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date: <u>Oct 3</u> Time: <u>3:55pm</u>
Samples Relinquished By (Print Name and Sign): _____	Date: _____ Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____ Time: _____

Page 1 of 1  
N: T-163109

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

**CLIENT NAME: EXP SERVICES INC**  
**220 Commerce Valley Drive West, Suite 500**  
**Markham, ON, ON L3T0A8**  
**(905) 695-3217**

**ATTENTION TO: Amanda Catenaro**  
**PROJECT: GTR-24000672-C0-4**

**AGAT WORK ORDER: 24H224127**

**TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor**  
**WATER ANALYSIS REVIEWED BY: Yris Verastegui, Inorganic Team Lead**

**DATE REPORTED: Nov 28, 2024**

**PAGES (INCLUDING COVER): 19**

**VERSION\*: 1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

**\*Notes**

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

# Certificate of Analysis

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

5835 COOPERS AVENUE  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1Y2  
 TEL (905)712-5100  
 FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - BTEX (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

SAMPLE DESCRIPTION:		BH4		
SAMPLE TYPE:		Water		
DATE SAMPLED:		2024-11-21 12:00		
Parameter	Unit	G / S	RDL	6348782
Benzene	µg/L	0.5	0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20
Ethylbenzene	µg/L	0.5	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20
o-Xylene	µg/L		0.10	<0.10
Xylenes (Total)	µg/L	72	0.20	<0.20
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		113
4-Bromofluorobenzene	% Recovery	50-140		100

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6348782** Results relate only to the items tested.  
 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:			
				BH3	BH7	BH7-0	BH4
				Water	Water	Water	Water
				2024-11-21	2024-11-21	2024-11-21	2024-11-21
				12:00	12:00	12:00	12:00
				6348736	6348778	6348779	6348782
Naphthalene	µg/L	7	0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.4	0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20
Sediment				1	1	1	1
Surrogate	Unit	Acceptable Limits					
Naphthalene-d8	%	50-140		89	108	91	95
Acridine-d9	%	50-140		76	84	75	73
Terphenyl-d14	%	50-140		84	112	107	78

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6348736-6348782** Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

Parameter	Unit	SAMPLE DESCRIPTION:		BH3	BH7	BH7-0
		G / S	RDL	Water	Water	Water
		DATE SAMPLED:		2024-11-21	2024-11-21	2024-11-21
				12:00	12:00	12:00
				6348736	6348778	6348779
F1 (C6 to C10)	µg/L	420	25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA
Sediment				1	1	1
Surrogate	Unit	Acceptable Limits				
Toluene-d8	%	50-140		109	106	113
Terphenyl	% Recovery	60-140		110	65	81

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6348736-6348779** The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.  
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

5835 COOPERS AVENUE  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1Y2  
 TEL (905)712-5100  
 FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

Parameter	Unit	SAMPLE DESCRIPTION:		Trip Blank
		G / S	RDL	6348732
Dichlorodifluoromethane	µg/L	590	0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

5835 COOPERS AVENUE  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1Y2  
 TEL (905)712-5100  
 FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

Parameter	Unit	SAMPLE DESCRIPTION:		Trip Blank
		G / S	RDL	6348732
Bromoform	µg/L	5	0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10
o-Xylene	µg/L		0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		112
4-Bromofluorobenzene	% Recovery	50-140		100

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6348732**  
 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
 1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
 The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

5835 COOPERS AVENUE  
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<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

Parameter	Unit	SAMPLE DESCRIPTION:		BH3	BH7	BH7-0
		G / S	RDL	Water	Water	Water
DATE SAMPLED:		2024-11-21	2024-11-21	2024-11-21	2024-11-21	2024-11-21
		12:00	12:00	12:00	12:00	12:00
		6348736	6348778	6348779		
Dichlorodifluoromethane	µg/L	590	0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

5835 COOPERS AVENUE  
 MISSISSAUGA, ONTARIO  
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 FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

ATTENTION TO: Amanda Catenaro

SAMPLED BY: JP

## O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:		
				BH3	BH7	BH7-0
				Water	Water	Water
				2024-11-21	2024-11-21	2024-11-21
				12:00	12:00	12:00
				6348736	6348778	6348779
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		109	106	113
4-Bromofluorobenzene	% Recovery	50-140		96	100	100

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6348736-6348779** Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
 1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
 The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

SAMPLED BY: JP

## O. Reg. 153(511) - All Metals (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

Parameter	Unit	SAMPLE DESCRIPTION:		BH2-23	BH5-23	BH3	BH7	BH7-0
		G / S	RDL	Water	Water	Water	Water	Water
		DATE SAMPLED:		2024-11-21	2024-11-21	2024-11-21	2024-11-21	2024-11-21
				12:00	12:00	12:00	12:00	12:00
				6348733	6348735	6348736	6348778	6348779
Dissolved Antimony	µg/L	1.5	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	13	1.0	<1.0	3.7	<1.0	<1.0	<1.0
Dissolved Barium	µg/L	610	2.0	24.3	32.7	23.7	24.3	25.2
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	1700	10.0	476	313	488	498	448
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	<0.50	0.74	1.81	2.43	2.06
Dissolved Copper	µg/L	5	1.0	1.1	3.6	3.0	1.3	1.7
Dissolved Lead	µg/L	1.9	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	23	0.50	12.6	6.71	11.9	15.7	15.5
Dissolved Nickel	µg/L	14	1.0	4.1	12.2	7.9	7.8	4.5
Dissolved Selenium	µg/L	5	1.0	4.1	4.2	4.2	4.5	4.1
Dissolved Silver	µg/L	0.3	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	13.4	40.7	21.3	13.2	12.8
Dissolved Vanadium	µg/L	3.9	0.40	0.87	9.55	<0.40	1.40	0.96
Dissolved Zinc	µg/L	160	5.0	<5.0	<5.0	9.2	<5.0	<5.0
Mercury	µg/L	0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	2.000	<2.000	<2.000	<2.000	<2.000	<2.000

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6348733-6348779** Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**





## Exceedance Summary

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6348733	BH2-23	ON T1 GW	O. Reg. 153(511) - All Metals (Water)	Dissolved Uranium	µg/L	8.9	13.4
6348735	BH5-23	ON T1 GW	O. Reg. 153(511) - All Metals (Water)	Dissolved Uranium	µg/L	8.9	40.7
6348735	BH5-23	ON T1 GW	O. Reg. 153(511) - All Metals (Water)	Dissolved Vanadium	µg/L	3.9	9.55
6348736	BH3	ON T1 GW	O. Reg. 153(511) - All Metals (Water)	Dissolved Uranium	µg/L	8.9	21.3
6348778	BH7	ON T1 GW	O. Reg. 153(511) - All Metals (Water)	Dissolved Uranium	µg/L	8.9	13.2
6348779	BH7-0	ON T1 GW	O. Reg. 153(511) - All Metals (Water)	Dissolved Uranium	µg/L	8.9	12.8

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

SAMPLED BY: JP

### Trace Organics Analysis

RPT Date: Nov 28, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - VOCs (Water)**

Dichlorodifluoromethane	6348782	6348782	<0.40	<0.40	NA	< 0.40	75%	50%	140%	90%	50%	140%	63%	50%	140%
Vinyl Chloride	6348782	6348782	<0.17	<0.17	NA	< 0.17	62%	50%	140%	71%	50%	140%	77%	50%	140%
Bromomethane	6348782	6348782	<0.20	<0.20	NA	< 0.20	70%	50%	140%	99%	50%	140%	61%	50%	140%
Trichlorofluoromethane	6348782	6348782	<0.40	<0.40	NA	< 0.40	75%	50%	140%	114%	50%	140%	64%	50%	140%
Acetone	6348782	6348782	<1.0	<1.0	NA	< 1.0	85%	50%	140%	82%	50%	140%	77%	50%	140%
1,1-Dichloroethylene	6348782	6348782	<0.30	<0.30	NA	< 0.30	89%	50%	140%	103%	60%	130%	71%	50%	140%
Methylene Chloride	6348782	6348782	<0.30	<0.30	NA	< 0.30	100%	50%	140%	97%	60%	130%	73%	50%	140%
trans- 1,2-Dichloroethylene	6348782	6348782	<0.20	<0.20	NA	< 0.20	83%	50%	140%	89%	60%	130%	66%	50%	140%
Methyl tert-butyl ether	6348782	6348782	<0.20	<0.20	NA	< 0.20	89%	50%	140%	62%	60%	130%	78%	50%	140%
1,1-Dichloroethane	6348782	6348782	<0.30	<0.30	NA	< 0.30	81%	50%	140%	61%	60%	130%	77%	50%	140%
Methyl Ethyl Ketone	6348782	6348782	<1.0	<1.0	NA	< 1.0	81%	50%	140%	94%	50%	140%	100%	50%	140%
cis- 1,2-Dichloroethylene	6348782	6348782	<0.20	<0.20	NA	< 0.20	63%	50%	140%	90%	60%	130%	72%	50%	140%
Chloroform	6348782	6348782	<0.20	<0.20	NA	< 0.20	69%	50%	140%	89%	60%	130%	76%	50%	140%
1,2-Dichloroethane	6348782	6348782	<0.20	<0.20	NA	< 0.20	75%	50%	140%	95%	60%	130%	71%	50%	140%
1,1,1-Trichloroethane	6348782	6348782	<0.30	<0.30	NA	< 0.30	65%	50%	140%	96%	60%	130%	68%	50%	140%
Carbon Tetrachloride	6348782	6348782	<0.20	<0.20	NA	< 0.20	69%	50%	140%	100%	60%	130%	62%	50%	140%
Benzene	6348782	6348782	<0.20	<0.20	NA	< 0.20	67%	50%	140%	96%	60%	130%	78%	50%	140%
1,2-Dichloropropane	6348782	6348782	<0.20	<0.20	NA	< 0.20	68%	50%	140%	89%	60%	130%	76%	50%	140%
Trichloroethylene	6348782	6348782	<0.20	<0.20	NA	< 0.20	65%	50%	140%	94%	60%	130%	75%	50%	140%
Bromodichloromethane	6348782	6348782	<0.20	<0.20	NA	< 0.20	62%	50%	140%	82%	60%	130%	66%	50%	140%
Methyl Isobutyl Ketone	6348782	6348782	<1.0	<1.0	NA	< 1.0	106%	50%	140%	103%	50%	140%	94%	50%	140%
1,1,2-Trichloroethane	6348782	6348782	<0.20	<0.20	NA	< 0.20	93%	50%	140%	117%	60%	130%	104%	50%	140%
Toluene	6348782	6348782	<0.20	<0.20	NA	< 0.20	96%	50%	140%	117%	60%	130%	105%	50%	140%
Dibromochloromethane	6348782	6348782	<0.10	<0.10	NA	< 0.10	87%	50%	140%	115%	60%	130%	87%	50%	140%
Ethylene Dibromide	6348782	6348782	<0.10	<0.10	NA	< 0.10	103%	50%	140%	113%	60%	130%	108%	50%	140%
Tetrachloroethylene	6348782	6348782	<0.20	<0.20	NA	< 0.20	90%	50%	140%	109%	60%	130%	96%	50%	140%
1,1,1,2-Tetrachloroethane	6348782	6348782	<0.10	<0.10	NA	< 0.10	80%	50%	140%	99%	60%	130%	75%	50%	140%
Chlorobenzene	6348782	6348782	<0.10	<0.10	NA	< 0.10	92%	50%	140%	108%	60%	130%	87%	50%	140%
Ethylbenzene	6348782	6348782	<0.10	<0.10	NA	< 0.10	87%	50%	140%	114%	60%	130%	85%	50%	140%
m & p-Xylene	6348782	6348782	<0.20	<0.20	NA	< 0.20	92%	50%	140%	102%	60%	130%	95%	50%	140%
Bromoform	6348782	6348782	<0.10	<0.10	NA	< 0.10	66%	50%	140%	87%	60%	130%	56%	50%	140%
Styrene	6348782	6348782	<0.10	<0.10	NA	< 0.10	74%	50%	140%	101%	60%	130%	75%	50%	140%
1,1,2,2-Tetrachloroethane	6348782	6348782	<0.10	<0.10	NA	< 0.10	81%	50%	140%	83%	60%	130%	78%	50%	140%
o-Xylene	6348782	6348782	<0.10	<0.10	NA	< 0.10	83%	50%	140%	103%	60%	130%	85%	50%	140%
1,3-Dichlorobenzene	6348782	6348782	<0.10	<0.10	NA	< 0.10	81%	50%	140%	94%	60%	130%	79%	50%	140%
1,4-Dichlorobenzene	6348782	6348782	<0.10	<0.10	NA	< 0.10	79%	50%	140%	91%	60%	130%	77%	50%	140%
1,2-Dichlorobenzene	6348782	6348782	<0.10	<0.10	NA	< 0.10	76%	50%	140%	85%	60%	130%	75%	50%	140%
n-Hexane	6348782	6348782	<0.20	<0.20	NA	< 0.20	103%	50%	140%	107%	60%	130%	66%	50%	140%

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

SAMPLED BY: JP

### Trace Organics Analysis (Continued)

RPT Date: Nov 28, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - PAHs (Water)**

Naphthalene	6348779	6348779	<0.20	<0.20	NA	< 0.20	93%	50%	140%	91%	50%	140%	79%	50%	140%
Acenaphthylene	6348779	6348779	<0.20	<0.20	NA	< 0.20	96%	50%	140%	85%	50%	140%	76%	50%	140%
Acenaphthene	6348779	6348779	<0.20	<0.20	NA	< 0.20	92%	50%	140%	86%	50%	140%	83%	50%	140%
Fluorene	6348779	6348779	<0.20	<0.20	NA	< 0.20	96%	50%	140%	90%	50%	140%	93%	50%	140%
Phenanthrene	6348779	6348779	<0.10	<0.10	NA	< 0.10	97%	50%	140%	96%	50%	140%	100%	50%	140%
Anthracene	6348779	6348779	<0.10	<0.10	NA	< 0.10	72%	50%	140%	90%	50%	140%	95%	50%	140%
Fluoranthene	6348779	6348779	<0.20	<0.20	NA	< 0.20	104%	50%	140%	99%	50%	140%	105%	50%	140%
Pyrene	6348779	6348779	<0.20	<0.20	NA	< 0.20	101%	50%	140%	95%	50%	140%	102%	50%	140%
Benzo(a)anthracene	6348779	6348779	<0.20	<0.20	NA	< 0.20	78%	50%	140%	87%	50%	140%	84%	50%	140%
Chrysene	6348779	6348779	<0.10	<0.10	NA	< 0.10	114%	50%	140%	96%	50%	140%	107%	50%	140%
Benzo(b)fluoranthene	6348779	6348779	<0.10	<0.10	NA	< 0.10	89%	50%	140%	112%	50%	140%	89%	50%	140%
Benzo(k)fluoranthene	6348779	6348779	<0.10	<0.10	NA	< 0.10	99%	50%	140%	99%	50%	140%	103%	50%	140%
Benzo(a)pyrene	6348779	6348779	<0.01	<0.01	NA	< 0.01	81%	50%	140%	79%	50%	140%	80%	50%	140%
Indeno(1,2,3-cd)pyrene	6348779	6348779	<0.20	<0.20	NA	< 0.20	91%	50%	140%	78%	50%	140%	95%	50%	140%
Dibenz(a,h)anthracene	6348779	6348779	<0.20	<0.20	NA	< 0.20	74%	50%	140%	64%	50%	140%	76%	50%	140%
Benzo(g,h,i)perylene	6348779	6348779	<0.20	<0.20	NA	< 0.20	89%	50%	140%	73%	50%	140%	79%	50%	140%

**O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)**

F1 (C6 to C10)	6348782	6348782	<25	<25	NA	< 25	79%	60%	140%	95%	60%	140%	87%	60%	140%
F2 (C10 to C16)	6348736	6348736	< 100	< 100	NA	< 100	118%	60%	140%	69%	60%	140%	73%	60%	140%
F3 (C16 to C34)	6348736	6348736	< 100	< 100	NA	< 100	116%	60%	140%	75%	60%	140%	72%	60%	140%
F4 (C34 to C50)	6348736	6348736	< 100	< 100	NA	< 100	64%	60%	140%	80%	60%	140%	82%	60%	140%

**O. Reg. 153(511) - VOCs (with PHC) (Water)**

Dichlorodifluoromethane	6348782	6348782	<0.40	<0.40	NA	< 0.40	75%	50%	140%	90%	50%	140%	63%	50%	140%
Vinyl Chloride	6348782	6348782	<0.17	<0.17	NA	< 0.17	62%	50%	140%	71%	50%	140%	77%	50%	140%
Bromomethane	6348782	6348782	<0.20	<0.20	NA	< 0.20	70%	50%	140%	99%	50%	140%	61%	50%	140%
Trichlorofluoromethane	6348782	6348782	<0.40	<0.40	NA	< 0.40	75%	50%	140%	114%	50%	140%	64%	50%	140%
Acetone	6348782	6348782	<1.0	<1.0	NA	< 1.0	85%	50%	140%	82%	50%	140%	77%	50%	140%
1,1-Dichloroethylene	6348782	6348782	<0.30	<0.30	NA	< 0.30	89%	50%	140%	103%	60%	130%	71%	50%	140%
Methylene Chloride	6348782	6348782	<0.30	<0.30	NA	< 0.30	100%	50%	140%	97%	60%	130%	73%	50%	140%
trans- 1,2-Dichloroethylene	6348782	6348782	<0.20	<0.20	NA	< 0.20	83%	50%	140%	89%	60%	130%	66%	50%	140%
Methyl tert-butyl ether	6348782	6348782	<0.20	<0.20	NA	< 0.20	89%	50%	140%	62%	60%	130%	78%	50%	140%
1,1-Dichloroethane	6348782	6348782	<0.30	<0.30	NA	< 0.30	81%	50%	140%	61%	60%	130%	77%	50%	140%
Methyl Ethyl Ketone	6348782	6348782	<1.0	<1.0	NA	< 1.0	81%	50%	140%	94%	50%	140%	100%	50%	140%
cis- 1,2-Dichloroethylene	6348782	6348782	<0.20	<0.20	NA	< 0.20	63%	50%	140%	90%	60%	130%	72%	50%	140%
Chloroform	6348782	6348782	<0.20	<0.20	NA	< 0.20	69%	50%	140%	89%	60%	130%	76%	50%	140%
1,2-Dichloroethane	6348782	6348782	<0.20	<0.20	NA	< 0.20	75%	50%	140%	95%	60%	130%	71%	50%	140%
1,1,1-Trichloroethane	6348782	6348782	<0.30	<0.30	NA	< 0.30	65%	50%	140%	96%	60%	130%	68%	50%	140%
Carbon Tetrachloride	6348782	6348782	<0.20	<0.20	NA	< 0.20	69%	50%	140%	100%	60%	130%	62%	50%	140%

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

SAMPLED BY: JP

### Trace Organics Analysis (Continued)

RPT Date: Nov 28, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	6348782	6348782	<0.20	<0.20	NA	< 0.20	67%	50%	140%	96%	60%	130%	78%	50%	140%
1,2-Dichloropropane	6348782	6348782	<0.20	<0.20	NA	< 0.20	68%	50%	140%	89%	60%	130%	76%	50%	140%
Trichloroethylene	6348782	6348782	<0.20	<0.20	NA	< 0.20	65%	50%	140%	94%	60%	130%	75%	50%	140%
Bromodichloromethane	6348782	6348782	<0.20	<0.20	NA	< 0.20	62%	50%	140%	82%	60%	130%	66%	50%	140%
Methyl Isobutyl Ketone	6348782	6348782	<1.0	<1.0	NA	< 1.0	106%	50%	140%	103%	50%	140%	94%	50%	140%
1,1,2-Trichloroethane	6348782	6348782	<0.20	<0.20	NA	< 0.20	93%	50%	140%	117%	60%	130%	104%	50%	140%
Toluene	6348782	6348782	<0.20	<0.20	NA	< 0.20	96%	50%	140%	117%	60%	130%	105%	50%	140%
Dibromochloromethane	6348782	6348782	<0.10	<0.10	NA	< 0.10	87%	50%	140%	115%	60%	130%	87%	50%	140%
Ethylene Dibromide	6348782	6348782	<0.10	<0.10	NA	< 0.10	103%	50%	140%	113%	60%	130%	108%	50%	140%
Tetrachloroethylene	6348782	6348782	<0.20	<0.20	NA	< 0.20	90%	50%	140%	109%	60%	130%	96%	50%	140%
1,1,1,2-Tetrachloroethane	6348782	6348782	<0.10	<0.10	NA	< 0.10	80%	50%	140%	99%	60%	130%	75%	50%	140%
Chlorobenzene	6348782	6348782	<0.10	<0.10	NA	< 0.10	92%	50%	140%	108%	60%	130%	87%	50%	140%
Ethylbenzene	6348782	6348782	<0.10	<0.10	NA	< 0.10	87%	50%	140%	114%	60%	130%	85%	50%	140%
m & p-Xylene	6348782	6348782	<0.20	<0.20	NA	< 0.20	92%	50%	140%	102%	60%	130%	95%	50%	140%
Bromoform	6348782	6348782	<0.10	<0.10	NA	< 0.10	66%	50%	140%	87%	60%	130%	56%	50%	140%
Styrene	6348782	6348782	<0.10	<0.10	NA	< 0.10	74%	50%	140%	101%	60%	130%	75%	50%	140%
1,1,2,2-Tetrachloroethane	6348782	6348782	<0.10	<0.10	NA	< 0.10	81%	50%	140%	83%	60%	130%	78%	50%	140%
o-Xylene	6348782	6348782	<0.10	<0.10	NA	< 0.10	83%	50%	140%	103%	60%	130%	85%	50%	140%
1,3-Dichlorobenzene	6348782	6348782	<0.10	<0.10	NA	< 0.10	81%	50%	140%	94%	60%	130%	79%	50%	140%
1,4-Dichlorobenzene	6348782	6348782	<0.10	<0.10	NA	< 0.10	79%	50%	140%	91%	60%	130%	77%	50%	140%
1,2-Dichlorobenzene	6348782	6348782	<0.10	<0.10	NA	< 0.10	76%	50%	140%	85%	60%	130%	75%	50%	140%
n-Hexane	6348782	6348782	<0.20	<0.20	NA	< 0.20	103%	50%	140%	107%	60%	130%	66%	50%	140%

**O. Reg. 153(511) - BTEX (Water)**

Benzene	6348782	6348782	<0.20	<0.20	NA	< 0.20	67%	50%	140%	96%	60%	130%	78%	50%	140%
Toluene	6348782	6348782	<0.20	<0.20	NA	< 0.20	96%	50%	140%	117%	60%	130%	105%	50%	140%
Ethylbenzene	6348782	6348782	<0.10	<0.10	NA	< 0.10	87%	50%	140%	114%	60%	130%	85%	50%	140%
m & p-Xylene	6348782	6348782	<0.20	<0.20	NA	< 0.20	92%	50%	140%	102%	60%	130%	95%	50%	140%
o-Xylene	6348782	6348782	<0.10	<0.10	NA	< 0.10	83%	50%	140%	103%	60%	130%	85%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

**Certified By:** \_\_\_\_\_



## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

SAMPLED BY: JP

### Water Analysis

RPT Date: Nov 28, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

O. Reg. 153(511) - All Metals (Water)															
Dissolved Antimony	6348733	6348733	<1.0	<1.0	NA	< 1.0	100%	70%	130%	109%	80%	120%	111%	70%	130%
Dissolved Arsenic	6348733	6348733	<1.0	4.3	NA	< 1.0	105%	70%	130%	109%	80%	120%	112%	70%	130%
Dissolved Barium	6348733	6348733	24.3	26.4	8.3%	< 2.0	101%	70%	130%	105%	80%	120%	108%	70%	130%
Dissolved Beryllium	6348733	6348733	<0.50	<0.50	NA	< 0.50	107%	70%	130%	116%	80%	120%	112%	70%	130%
Dissolved Boron	6348733	6348733	476	481	1.0%	< 10.0	101%	70%	130%	107%	80%	120%	104%	70%	130%
Dissolved Cadmium	6348733	6348733	<0.20	<0.20	NA	< 0.20	99%	70%	130%	99%	80%	120%	108%	70%	130%
Dissolved Chromium	6348733	6348733	<2.0	<2.0	NA	< 2.0	100%	70%	130%	111%	80%	120%	106%	70%	130%
Dissolved Cobalt	6348733	6348733	<0.50	<0.50	NA	< 0.50	96%	70%	130%	102%	80%	120%	101%	70%	130%
Dissolved Copper	6348733	6348733	1.1	1.1	NA	< 1.0	99%	70%	130%	100%	80%	120%	96%	70%	130%
Dissolved Lead	6348733	6348733	<0.50	<0.50	NA	< 0.50	95%	70%	130%	104%	80%	120%	99%	70%	130%
Dissolved Molybdenum	6348733	6348733	12.6	12.7	0.8%	< 0.50	103%	70%	130%	112%	80%	120%	114%	70%	130%
Dissolved Nickel	6348733	6348733	4.1	2.7	NA	< 1.0	97%	70%	130%	108%	80%	120%	99%	70%	130%
Dissolved Selenium	6348733	6348733	4.1	4.5	NA	< 1.0	100%	70%	130%	102%	80%	120%	109%	70%	130%
Dissolved Silver	6348733	6348733	<0.20	<0.20	NA	< 0.20	103%	70%	130%	101%	80%	120%	98%	70%	130%
Dissolved Thallium	6348733	6348733	<0.30	<0.30	NA	< 0.30	94%	70%	130%	106%	80%	120%	100%	70%	130%
Dissolved Uranium	6348733	6348733	13.4	13.9	3.7%	< 0.50	102%	70%	130%	111%	80%	120%	109%	70%	130%
Dissolved Vanadium	6348733	6348733	0.87	0.48	NA	< 0.40	102%	70%	130%	108%	80%	120%	109%	70%	130%
Dissolved Zinc	6348733	6348733	<5.0	<5.0	NA	< 5.0	100%	70%	130%	108%	80%	120%	101%	70%	130%
Mercury	6348733	6348733	<0.02	<0.02	NA	< 0.02	99%	70%	130%	102%	80%	120%	93%	70%	130%
Chromium VI	6348733	6348733	<2.000	<2.000	NA	< 2	99%	70%	130%	91%	80%	120%	107%	70%	130%

Comments: NA signifies Not Applicable.  
 Duplicate NA: results are under 5X the RDL and will not be calculated.

**Certified By:** 

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

*Results relate only to the items tested. Results apply to samples as received.*

## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H224127**
**PROJECT: GTR-24000672-C0-4**
**ATTENTION TO: Amanda Catenaro**
**SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,**
**SAMPLED BY: JP**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Trace Organics Analysis</b>			
Benzene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Napthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS

## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H224127**
**PROJECT: GTR-24000672-C0-4**
**ATTENTION TO: Amanda Catenaro**
**SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,**
**SAMPLED BY: JP**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
F1 (C6 to C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,

SAMPLED BY: JP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H224127**
**PROJECT: GTR-24000672-C0-4**
**ATTENTION TO: Amanda Catenaro**
**SAMPLING SITE: 1544 & 1546 Far mile Creek Rd,**
**SAMPLED BY: JP**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Water Analysis</b>			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA

Have feedback?  
Scan here for a quick survey!



5835 Coopers Avenue  
Mississauga, Ontario L4Z 1Y2  
Ph: 905.712.5100 Fax: 905.712.5122  
web@earth.agatlabs.com

### Laboratory Use Only

Work Order #: 24H224127  
Cooler Quantity: LG COOLER  
Arrival Temperatures: 5.6 | 5.9 | 6.0  
Depot Temperatures: 7.6 | 7.8 | 8.0  
Custody Seal Intact:  Yes  No  N/A  
Notes: LOOSE ICE

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: Exp Services Inc  
Contact: Amanda Catenara & Zenith Wong  
Address: 920 Commerce Valley Dr. W. Suite 10  
Markham ON  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to: Amanda.Catenara@exp.com / Jamesyn.  
1. Email: Zenith.wong@exp.com / Patterson@exp.com  
2. Email: \_\_\_\_\_

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Regulation 406  Sewer Use  
 Sanitary  Storm

Table Indicate One  Ind/Com  Res/Park  Agriculture  
 Res/Com  Ind/Com  Res/Park  Agriculture

Soil Texture (Check One)  
 Coarse  Regulation 558  Other  
 Fine  CCME

Region: \_\_\_\_\_  
Prov. Water Quality Objectives (PWQO)  
Indicate One

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days  
Rush TAT (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

### Project Information:

Project: GTR-24003672-C0-4  
Site Location: 1549 & 1546 Farm Mile Creek Rd, North, ON  
Sampled By: JP  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note, if quotation number is not provided, client will be billed full price for analysis.

### Is this submission for a Record of Site Condition (RSC)?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Invoice Information:

Company: \_\_\_\_\_ Bill To Same: Yes  No   
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: \_\_\_\_\_

### Legal Sample

### Sample Matrix Legend

GW Ground Water SD Sediment  
O Oil SW Surface Water  
P Paint R Rock/Shale  
S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered	Metals	Hg	CrVI	DOC	O. Reg 153	O. Reg 406	O. Reg 558	Potentially Hazardous or High Concentration (Y/N)																	
								Metals & Inorganics	Metals - <input checked="" type="checkbox"/> CrVI, <input checked="" type="checkbox"/> Hg, <input checked="" type="checkbox"/> HWSB			BTEX, FL-F4, PHCs	VOC	PAHs	PCBs, Aroclors	Regulation 406 Characterization Package pH, Metals, BTEX, FL-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach mSPLP, Metals, VOCs, SVOCs, DOC	Landfill Disposal Characterization TCLP: TCLP, Metals, VOCs, Aroclors, PCBs	Corrosivity: <input type="checkbox"/> Moisture <input type="checkbox"/> Sulphide												
1. Trip Blank	Nov 21	AM	3	GW																												
2. BH2-23		PM	4			Y		X																								
3. BH5-23		AM	4			Y		X																								
4. BH3		AM	11			Y		X	X	X	X																					
5. BH7-		AM	11			Y		X	X	X	X																					
6. BH7-0		AM	11			Y		X	X	X	X																					
7. BH4		AM	7																													
8.		AM																														
9.		AM																														
10.		AM																														
11.		AM																														

Samples Relinquished By (Print Name and Sign): James Patterson Date: Nov 21 Time: 4:45pm  
 Samples Relinquished By (Print Name and Sign): Amal Rajan Date: Nov 22/24 Time: 3pm  
 Samples Relinquished By (Print Name and Sign): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Samples Received By (Print Name and Sign): Amal Rajan Date: Nov 21/24 Time: 4:45pm  
 Samples Received By (Print Name and Sign): Tina Date: Nov 22 Time: 4:30pm  
 Samples Received By (Print Name and Sign): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Page 1 of 1  
N#: T-154537

**CLIENT NAME: EXP SERVICES INC**  
**1266 SOUTH SERVICE ROAD, SUITE C1-1**  
**STONEY CREEK , ON L8E 5R9**  
**(905) 573-4000**

**ATTENTION TO: Amanda Catenaro / Zenith Wong**

**PROJECT: GTR-24000672-C0-4**

**AGAT WORK ORDER: 24H227786**

**TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor**

**WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead**

**DATE REPORTED: Dec 10, 2024**

**PAGES (INCLUDING COVER): 12**

**VERSION\*: 1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

**\*Notes**

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

# Certificate of Analysis

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK RD, NOTL

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLED BY: JP

## O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-10

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:	
				BH4	BH4-0
				SAMPLE TYPE:	
				Water	
				DATE SAMPLED:	
				2024-12-02	2024-12-02
				12:00	12:00
				6376784	6376832
Naphthalene	µg/L	7	0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20
Phenanthrene	µg/L	0.1	0.10	<0.10	<0.10
Anthracene	µg/L	0.1	0.10	<0.10	<0.10
Fluoranthene	µg/L	0.4	0.20	<0.20	<0.20
Pyrene	µg/L	0.2	0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	2	0.20	<0.20	<0.20
Sediment				1	1
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140		110	122
Acridine-d9	%	50-140		106	110
Terphenyl-d14	%	50-140		110	114

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6376784-6376832** Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

5835 COOPERS AVENUE  
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<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK RD, NOTL

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLED BY: JP

## O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH4	BH4-0
		G / S	RDL	Water	Water
		DATE SAMPLED:		2024-12-02	2024-12-02
				12:00	12:00
				6376784	6376832
Benzene	µg/L	0.5	0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20
o-Xylene	µg/L		0.10	<0.10	<0.10
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20
F1 (C6 to C10)	µg/L	420	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA
Sediment				1	1
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	60-140		92	90
Terphenyl	% Recovery	60-140		64	69

**Certified By:**





## Certificate of Analysis

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK RD, NOTL

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLED BY: JP

### O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-10

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6376784-6376832** Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.  
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount  
The C6-C10 fraction is calculated using toluene response factor.  
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**

# Certificate of Analysis

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

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CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK RD, NOTL

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLED BY: JP

## O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-10

Parameter	Unit	SAMPLE DESCRIPTION:		BH3	BH7	BH7-0	BH5-23
		G / S	RDL	Water	Water	Water	Water
		DATE SAMPLED:		2024-12-02	2024-12-02	2024-12-02	2024-12-02
				12:00	12:00	12:00	12:00
				6376783	6376833	6376834	6376835
Dissolved Antimony	µg/L	1.5	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	13	1.0	<1.0	<1.0	<1.0	1.8
Dissolved Barium	µg/L	610	2.0	21.8	22.5	24.7	28.0
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	1700	10.0	506	471	435	291
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	1.23	2.64	2.59	<b>4.50</b>
Dissolved Copper	µg/L	5	1.0	1.5	1.2	1.4	2.3
Dissolved Lead	µg/L	1.9	0.50	<0.50	<0.50	<0.50	0.61
Dissolved Molybdenum	µg/L	23	0.50	11.3	9.78	16.2	4.26
Dissolved Nickel	µg/L	14	1.0	10.8	4.5	4.6	12.1
Dissolved Selenium	µg/L	5	1.0	<1.0	<1.0	2.1	<1.0
Dissolved Silver	µg/L	0.3	0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	<b>20.3</b>	<b>11.2</b>	<b>11.7</b>	<b>30.8</b>
Dissolved Vanadium	µg/L	3.9	0.40	<0.40	0.78	1.56	<b>4.72</b>
Dissolved Zinc	µg/L	160	5.0	<5.0	<5.0	<5.0	5.1
Mercury	µg/L	0.1	0.02	<0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	2.000	<2.000	<2.000	<2.000	<2.000
Cyanide, WAD	µg/L	5	2	<2	<2	<2	<2
Dissolved Sodium	µg/L	490000	50	309000	256000	254000	355000
Chloride	µg/L	790000	122	127000	150000	148000	328000
Electrical Conductivity	uS/cm	NA	2	5500	4500	4500	6890
pH	pH Units		NA	7.67	7.77	7.78	7.67

**Certified By:**





# Certificate of Analysis

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

5835 COOPERS AVENUE  
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CANADA L4Z 1Y2  
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FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK RD, NOTL

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLED BY: JP

## O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-10

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6376783-6376835** Metals analysis completed on a filtered sample.

pH is a recommended field analysis taken within 15 minutes of sample collection. Due to the potential for rapid change in sample equilibrium chemistry laboratory results may differ from field measured results

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**





## Exceedance Summary

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

5835 COOPERS AVENUE  
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FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6376783	BH3	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Uranium	µg/L	8.9	20.3
6376833	BH7	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Uranium	µg/L	8.9	11.2
6376834	BH7-0	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Uranium	µg/L	8.9	11.7
6376835	BH5-23	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Cobalt	µg/L	3.8	4.50
6376835	BH5-23	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Uranium	µg/L	8.9	30.8
6376835	BH5-23	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Vanadium	µg/L	3.9	4.72

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK RD, NOTL

SAMPLED BY: JP

### Trace Organics Analysis

RPT Date: Dec 10, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)**

Benzene	6371086		<0.20	<0.20	NA	< 0.20	100%	60%	140%	86%	60%	140%	114%	60%	140%
Toluene	6371086		<0.20	<0.20	NA	< 0.20	100%	60%	140%	89%	60%	140%	82%	60%	140%
Ethylbenzene	6371086		<0.10	<0.10	NA	< 0.10	94%	60%	140%	83%	60%	140%	90%	60%	140%
m & p-Xylene	6371086		<0.20	<0.20	NA	< 0.20	97%	60%	140%	86%	60%	140%	88%	60%	140%
o-Xylene	6371086		<0.10	<0.10	NA	< 0.10	92%	60%	140%	89%	60%	140%	115%	60%	140%
F1 (C6 to C10)	6371086		<25	<25	NA	< 25	94%	60%	140%	92%	60%	140%	71%	60%	140%
F2 (C10 to C16)	6378520		< 100	< 100	NA	< 100	118%	60%	140%	77%	60%	140%	81%	60%	140%
F3 (C16 to C34)	6378520		< 100	< 100	NA	< 100	126%	60%	140%	76%	60%	140%	91%	60%	140%
F4 (C34 to C50)	6378520		< 100	< 100	NA	< 100	82%	60%	140%	93%	60%	140%	90%	60%	140%

**O. Reg. 153(511) - PAHs (Water)**

Naphthalene	6376672		<0.20	<0.20	NA	< 0.20	91%	50%	140%	89%	50%	140%	72%	50%	140%
Acenaphthylene	6376672		<0.20	<0.20	NA	< 0.20	94%	50%	140%	94%	50%	140%	92%	50%	140%
Acenaphthene	6376672		<0.20	<0.20	NA	< 0.20	92%	50%	140%	99%	50%	140%	98%	50%	140%
Fluorene	6376672		<0.20	<0.20	NA	< 0.20	97%	50%	140%	107%	50%	140%	115%	50%	140%
Phenanthrene	6376672		<0.10	<0.10	NA	< 0.10	101%	50%	140%	118%	50%	140%	117%	50%	140%
Anthracene	6376672		<0.10	<0.10	NA	< 0.10	79%	50%	140%	111%	50%	140%	108%	50%	140%
Fluoranthene	6376672		<0.20	<0.20	NA	< 0.20	107%	50%	140%	113%	50%	140%	104%	50%	140%
Pyrene	6376672		<0.20	<0.20	NA	< 0.20	107%	50%	140%	112%	50%	140%	104%	50%	140%
Benzo(a)anthracene	6376672		<0.20	<0.20	NA	< 0.20	100%	50%	140%	111%	50%	140%	115%	50%	140%
Chrysene	6376672		<0.10	<0.10	NA	< 0.10	103%	50%	140%	92%	50%	140%	89%	50%	140%
Benzo(b)fluoranthene	6376672		<0.10	<0.10	NA	< 0.10	99%	50%	140%	97%	50%	140%	82%	50%	140%
Benzo(k)fluoranthene	6376672		<0.10	<0.10	NA	< 0.10	103%	50%	140%	82%	50%	140%	98%	50%	140%
Benzo(a)pyrene	6376672		<0.01	<0.01	NA	< 0.01	94%	50%	140%	76%	50%	140%	80%	50%	140%
Indeno(1,2,3-cd)pyrene	6376672		<0.20	<0.20	NA	< 0.20	90%	50%	140%	85%	50%	140%	85%	50%	140%
Dibenz(a,h)anthracene	6376672		<0.20	<0.20	NA	< 0.20	91%	50%	140%	81%	50%	140%	73%	50%	140%
Benzo(g,h,i)perylene	6376672		<0.20	<0.20	NA	< 0.20	92%	50%	140%	76%	50%	140%	74%	50%	140%

**Certified By:**



## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK RD, NOTL

SAMPLED BY: JP

Water Analysis															
RPT Date: Dec 10, 2024			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - Metals & Inorganics (Water)**

Dissolved Antimony	6367350		<1.0	<1.0	NA	< 1.0	99%	70%	130%	102%	80%	120%	99%	70%	130%
Dissolved Arsenic	6367350		<1.0	<1.0	NA	< 1.0	97%	70%	130%	104%	80%	120%	104%	70%	130%
Dissolved Barium	6367350		205	198	3.5%	< 2.0	94%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Beryllium	6367350		<0.50	<0.50	NA	< 0.50	112%	70%	130%	115%	80%	120%	108%	70%	130%
Dissolved Boron	6367350		126	130	3.1%	< 10.0	99%	70%	130%	108%	80%	120%	99%	70%	130%
Dissolved Cadmium	6367350		<0.20	<0.20	NA	< 0.20	100%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Chromium	6367350		<2.0	<2.0	NA	< 2.0	98%	70%	130%	106%	80%	120%	112%	70%	130%
Dissolved Cobalt	6367350		0.77	0.51	NA	< 0.50	100%	70%	130%	111%	80%	120%	107%	70%	130%
Dissolved Copper	6367350		<1.0	<1.0	NA	< 1.0	97%	70%	130%	105%	80%	120%	103%	70%	130%
Dissolved Lead	6367350		<0.50	<0.50	NA	< 0.50	98%	70%	130%	97%	80%	120%	91%	70%	130%
Dissolved Molybdenum	6367350		1.18	1.68	NA	< 0.50	100%	70%	130%	102%	80%	120%	99%	70%	130%
Dissolved Nickel	6367350		1.7	1.4	NA	< 1.0	97%	70%	130%	110%	80%	120%	108%	70%	130%
Dissolved Selenium	6367350		2.1	<1.0	NA	< 1.0	99%	70%	130%	101%	80%	120%	100%	70%	130%
Dissolved Silver	6367350		<0.20	<0.20	NA	< 0.20	90%	70%	130%	93%	80%	120%	90%	70%	130%
Dissolved Thallium	6367350		<0.30	<0.30	NA	< 0.30	92%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Uranium	6367350		2.47	2.51	NA	< 0.50	83%	70%	130%	102%	80%	120%	100%	70%	130%
Dissolved Vanadium	6367350		0.45	0.49	NA	< 0.40	101%	70%	130%	116%	80%	120%	116%	70%	130%
Dissolved Zinc	6367350		13.4	<5.0	NA	< 5.0	101%	70%	130%	115%	80%	120%	129%	70%	130%
Mercury	6376783	6376783	<0.02	<0.02	NA	< 0.02	100%	70%	130%	102%	80%	120%	96%	70%	130%
Chromium VI	6376672		<2.000	<2.000	NA	< 2	100%	70%	130%	99%	80%	120%	126%	70%	130%
Cyanide, WAD	6383149		<2	<2	NA	< 2	105%	70%	130%	91%	80%	120%	108%	70%	130%
Dissolved Sodium	6367350		73500	70300	4.5%	< 50	114%	70%	130%	119%	80%	120%	96%	70%	130%
Chloride	6376297		175000	172000	1.7%	< 100	92%	70%	130%	98%	80%	120%	NA	70%	130%
Electrical Conductivity	6376672		1180	1180	0.0%	< 2	102%	90%	110%						
pH	6376672		7.76	7.83	0.9%	NA	100%	90%	110%						

Comments: NA signifies Not Applicable.  
 Duplicate NA: results are under 5X the RDL and will not be calculated.

Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

Certified By:



## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 24H227786**
**PROJECT: GTR-24000672-C0-4**
**ATTENTION TO: Amanda Catenaro / Zenith Wong**
**SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK RD, NOTL**
**SAMPLED BY: JP**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Trace Organics Analysis</b>			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
Benzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Toluene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F1 (C6 to C10)	VOL-91- 5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID

## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLING SITE: 1544 & 1546 FOUR MILE CREEK RD, NOTL

SAMPLED BY: JP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
<b>Water Analysis</b>			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Dissolved Sodium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP/MS
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE



Feedback?  
Please provide  
feedback for a  
survey!



5835 Coopers Avenue  
Mississauga, Ontario L4Z 1Y2  
Ph: 905.712.5100 Fax: 905.712.5122  
web@earth.agatlabs.com

### Laboratory Use Only

Work Order #: 24427786  
Cooler Quantity: LG COOLER  
Arrival Temperatures: 2-5 | 2-6 | 3-0  
Depot Temperatures: 3-3 | 3-4 | 3-2  
Custody Seal Intact:  Yes  No  N/A  
Notes: LOOSE ICE

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**  
Company: Exp Services Inc  
Contact: Amanda Catenaro Zenith Wang  
Address: 220 Commerce Valley Dr. West, Suite 100 Markham ON  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: Amanda.Catenaro@exp.com / Jamesyn.Patterson@exp.com  
2. Email: Zenith.Wang@exp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Regulation 406  
 Sewer Use  
 Sanitary  Storm  
 Ind/Com  
 Res/Park  
 Agriculture  
 Prov. Water Quality Objectives (PWQO)  
 Other  
 Regulation 558  
 CCME

**Project Information:**  
Project: GTR-24000672-CO-4  
Site Location: 574 81516 Four mile Creek Rd, North  
Sampled By: JP  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: if quotation number is not provided, client will be billed full price for analysis.

### Is this submission for a Record of Site Condition (RSC)?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Turnaround Time (TAT) Required:

**Regular TAT**  5 to 7 Business Days  
**Rush TAT** (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
**OR** Date Required (Rush Surcharges May Apply): \_\_\_\_\_

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

**Invoice Information:**  
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: \_\_\_\_\_  
Bill To Same:  Yes  No

### Legal Sample

### Sample Matrix Legend

**GW** Ground Water **SD** Sediment  
**O** Oil **SW** Surface Water  
**P** Paint **R** Rock/Shale  
**S** Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Regulatory Parameters																
							Metals & Inorganics	Metals - CrVI, Hg, HWSB	BTEX, F1-F4, PHCs	VOC	PAHs	PCBs: Aroclors	Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4, EC, SAR	Regulation 406 SPLP Rainwater Leach mSPLP: Metals, VOCs, SVOCs, DOC	Landfill Disposal Characterization TCLP: TCLP: MS1, VOCs, ABNS, PAHs, PCBs	Corrosivity: Moisture, Sulphide	Potentially Hazardous or High Concentration (Y/N)						
1. RH3	Dec 2	PM	6	GW		Y	X																
2. BH4			7																				
3. BH4-0			7																				
4. BH7			6			Y	X																
5. BH7-0			6			Y	X																
6. Tap Blank			6			Y	X																
7. BH5-23			6			Y	X																
8.																							
9.																							
10.																							
11.																							

Samples Relinquished By (Print Name and Sign): James Patterson Date: Dec 3 Time: 11am  
 Samples Received By (Print Name and Sign): DJAC Date: Dec 3 Time: 11am  
 Samples Relinquished By (Print Name and Sign): DJAC Date: Dec 3/24 Time: 3PM  
 Samples Received By (Print Name and Sign): NA Date: Dec 3 Time: 3:47pm  
 Samples Relinquished By (Print Name and Sign): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Samples Received By (Print Name and Sign): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Page 1 of 1  
N#: T-164917

Pink Copy - Client Yellow Copy - AGAT White Copy - AGAT

**CLIENT NAME: EXP SERVICES INC**  
**1266 SOUTH SERVICE ROAD, SUITE C1-1**  
**STONEY CREEK , ON L8E 5R9**  
**(905) 573-4000**

**ATTENTION TO: Amanda Catenaro**  
**PROJECT: GTR-24000672-B0-1**  
**AGAT WORK ORDER: 25H282733**

**SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead**  
**DATE REPORTED: May 05, 2025**  
**PAGES (INCLUDING COVER): 5**  
**VERSION\*: 1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

**\*Notes**

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

# Certificate of Analysis

AGAT WORK ORDER: 25H282733

PROJECT: GTR-24000672-B0-1

5835 COOPERS AVENUE  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1Y2  
 TEL (905)712-5100  
 FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Four Mile Creek Rd, N.O.T.L

ATTENTION TO: Amanda Catenaro

SAMPLED BY: SG

## O. Reg. 153(511) - ORPs (Soil)

DATE RECEIVED: 2025-04-28

DATE REPORTED: 2025-05-05

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S	RDL	BH1A SS1	BH1B SS1	BH1C SS1	BH5A SS1	BH5B SS1	BH5C SS1		
				SAMPLE TYPE: Water							
				DATE SAMPLED:							
pH, 2:1 CaCl <sub>2</sub> Extraction	pH Units		NA	7.05	6.70	6.93	6.93	7.01	9.15		

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6694866-6694872 pH was determined on the 0.01M CaCl<sub>2</sub> extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



*Ally Bask*

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25H282733

PROJECT: GTR-24000672-B0-1

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mile Creek Rd, N.O.T.L

SAMPLED BY: SG

Soil Analysis															
RPT Date: May 05, 2025			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - ORPs (Soil)**

pH, 2:1 CaCl2 Extraction	6698166		6.86	6.97	1.7%	NA	101%	80%	120%
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Comments: NA signifies Not Applicable.  
 pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

**O. Reg. 153(511) - ORPs (Soil)**

pH, 2:1 CaCl2 Extraction	6694868	6694868	6.70	6.89	2.8%	NA	101%	80%	120%
--------------------------	---------	---------	------	------	------	----	------	-----	------

Comments: NA signifies Not Applicable.  
 pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

Certified By:



## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25H282733

PROJECT: GTR-24000672-B0-1

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mile Creek Rd, N.O.T.L

SAMPLED BY: SG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Soil Analysis</b>			
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

Have feedback?  
Scan here for a quick survey!



5835 Coopers Avenue  
Burlington, Ontario L4Z 1Y2  
Fax: 905.712.5122  
earth.agatlabs.com

### Laboratory Use Only

Work Order #: 254252733  
Cooler Quantity: 1 PAD  
Arrival Temperatures: 3.5 13.0 13.1  
Depot Temperatures: 9.9 10.0 10.2  
Custody Seal Intact:  Yes  No  N/A  
Notes: LOOSE ICE

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (Downloaded by humans)

### Report Information:

Company: EXP Services Inc  
Contact: Amanda Catenaro / Accounts Payable  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: amanda.catenaro@exp.com  
2. Email: Scott.grant-hose@exp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Regulation 406  
 Sewer Use  
 Sanitary  Storm  
 Ind/Com  
 Res/Park  
 Agriculture  
 Prov. Water Quality Objectives (PWQO)  
 Other  
 Regulation 558  
 CCME

### Project Information:

Project: ATR-24000672-BO-1  
Site Location: Four Mile Creek Rd, N.O.T.L  
Sampled By: SG  
AGAT Quote #: \_\_\_\_\_ PO: ATR-24000672-Bo

### Is this submission for a Record of Site Condition (RSC)?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days  
Rush TAT (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays  
For 'Same Day' analysis, please contact your AGAT CSR

### Invoice Information:

Bill To Same: Yes  No   
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: AP@exp.com

### Legal Sample

### Sample Matrix Legend

GW Ground Water SD Sediment  
O Oil SW Surface Water  
P Paint R Rock/Shale  
S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	O. Reg 153	O. Reg 406	O. Reg 558	Potentially Hazardous or High Concentration (Y/N)
1. BH1A SSI	2025/04/25	8:30 AM	1	S							
2. BH1B SSI	↓	8:35 AM	↓	↓							
3. BH1C SSI	↓	8:40 AM	↓	↓							
4. BH5A SSI	↓	8:45 AM	↓	↓							
5. BH5B SSI	↓	8:50 AM	↓	↓							
6. BH5C SSI	↓	8:55 AM	↓	↓							
7.		AM									
8.		PM									
9.		PM									
10.		PM									
11.		PM									

Samples Relinquished By (Print Name and Sign): <u>S Grant-Hose SG-HH</u>	Date: <u>2025/04/28</u>	Time: <u>1:25</u>	Samples Received By (Print Name and Sign): <u>DRAC [Signature]</u>	Date: <u>Apr 28/25</u>	Time: <u>1:25pm</u>
Samples Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: <u>Apr 28/25</u>	Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date: <u>Apr 28/25</u>	Time: <u>[Signature]</u>
Samples Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: <u>[Signature]</u>	Time: <u>[Signature]</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date: <u>[Signature]</u>	Time: <u>[Signature]</u>

Page 1 of 1  
N: T-164346

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Appendix H – Phase Two Conceptual Site Model



## Phase Two Conceptual Site Model – 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

A Phase Two Conceptual Site Model (CSM) has been prepared for the site. The CSM makes reference to the following figures:

Figure 1: Site Location Plan

Figure 2: Phase One Study Area, Surrounding Land Use and Potentially Contaminating Activities

Figure 3: Site Plan

Figure 4: Areas of Potential Environmental Concern (APECs)

Figure 5A: Borehole/Monitoring Well Location Plan

Figure 5B: Borehole/Monitoring Well Location Plan and APECs

Figure 5C: Remedial Excavation Area and Confirmatory Sampling Plan

Figure 6A: Groundwater Contour Plan – October 2024

Figure 6B: Groundwater Contour Plan – December 2024

Figure 7A: Soil Analytical Results – Petroleum Hydrocarbons (PHCs) including Benzene, Toluene, Ethylbenzene and Xylene (BTEX)

Figure 7B: Remedial Excavation: Petroleum Hydrocarbons (PHCs)

Figure 7C: Post-Remediation PHCs Soil Analytical Results – Petroleum Hydrocarbons (PHCs)

Figure 8: Soil Analytical Results – Volatile Organic Compounds (VOCs)

Figure 9: Soil Analytical Results – Polycyclic Aromatic Hydrocarbons (PAHs)

Figure 10: Soil Analytical Results – Metals (including hydride-forming metals) and ORPs (B-HWS, Cr (VI), Hg, CN-)

Figure 11: Soil Analytical Results – EC and SAR

Figure 12: Soil Analytical Results – Polychlorinated Biphenyls (PCBs)

Figure 13: Soil Analytical Results – Organochlorine Pesticides (OCPs)

Figure 14: Groundwater Analytical Results – Petroleum Hydrocarbons (PHCs) and BTEX

Figure 15: Groundwater Analytical Results – Volatile Organic Compounds (VOCs)

Figure 16: Groundwater Analytical Results – Polycyclic Aromatic Hydrocarbons (PAHs)

Figure 17: Groundwater Analytical Results – Metals (including hydride-forming metals) and ORPs (Cr (VI), Hg, CN-)

Figure 18: Groundwater Analytical Results – Sodium (Na) and Chloride (Cl)

Figure 19: Cross Section A-A'

Figure 19A: Cross Section A-A' – Soil Analytical Results – PHC and BTEX

Figure 19B: Cross Section A-A' – Groundwater Analytical Results – PHCs and BTEX

Figure 19C: Cross Section A-A' – Groundwater Analytical Results – VOCs

Figure 19D: Cross Section A-A' – Groundwater Analytical Results – PAHs

Figure 19E: Cross Section A-A' – Groundwater Analytical Results – Metals (including hydride-forming metals) and ORPs (Cr (VI), Hg, CN-)

Figure 20: Cross Section B-B'

Figure 20A: Cross Section B-B' – Soil Analytical Results – PHC and BTEX

Figure 20B: Cross Section B-B' – Groundwater Analytical Results – PHCs and BTEX

Figure 20C: Cross Section B-B' – Groundwater Analytical Results – VOCs

Figure 20D: Cross Section B-B' – Groundwater Analytical Results – PAHs

Figure 20E: Cross Section B-B' – Groundwater Analytical Results – Metals (including hydride-forming metals) and ORPs (Cr (VI), Hg, CN-)

Figure 21: Cross Section C-C'

Figure 21A: Cross Section C-C' – Soil Analytical Results – Metals (including hydride-forming metals) and ORPs (Cr (VI), Hg, CN-)

Figure 21B: Cross Section C-C' – Groundwater Analytical Results – Metals (including hydride-forming metals) and ORPs (Cr (VI), Hg, CN-)

Figure 22A: Pre-Remediation On and Off-Site Human Health Conceptual Site Model

Figure 22B: Post-Remediation On and Off-Site Human Health Conceptual Site Model

Figure 23A: Pre-Remediation On and Off-Site Ecological Conceptual Site Model

Figure 23B: Post-Remediation On and Off-Site Ecological Conceptual Site Model

## 1. Phase Two Conceptual Site Model

This section presents a Phase Two Conceptual Site Model (P2CSM) providing a narrative, graphical and tabulated description integrating information related to the Site geologic and hydrogeologic conditions, areas of potential environmental concern/potential contaminating activities, the presence and distribution of potential contaminants of concern, contaminant fate and transport, and potential exposure pathways. These components are discussed in the following sections. The Phase Two CSM was completed in accordance with Ontario Regulation (O. Reg.) 153/04 as defined by the Ministry of the Environment, Conservation, and Parks (MECP).

All analytical results were compared to the MECP (2011) Table 9 Site Condition Standards: applicable to sites with non-potable groundwater and that are within 30 meters (m) of a water body for Residential/Parkland/Institutional/Commercial/Community/Industrial (RPI/ICC) property use, and medium to fine textured soils (hereinafter referred to as the “Table 9 SCS”).

All investigative work at the Site was compiled into the current P2CSM.

### 1.1 Introduction

The Site is approximately 1.08 hectares (2.66 acres) in size and is currently occupied by a split-level residential home and a detached, formerly commercial garage. The Site was first developed for mixed commercial and residential use in the 1960s and historically has been used as a garage for construction and maintenance of marine vehicles. Two (2) underground storage tanks (USTs) are associated with the Site; one (1) historical UST located at the exterior of the garage, and one (1) present UST currently located at the north end of the residential building. The Phase One Study Area consists of properties within a distance of approximately 250 metres from the Site boundaries. The Phase One Study Area and Surrounding Land Use are shown on Figure 2.

The Site identification information is presented in Table 1.

Table 1: Site Identification Information

<b>Municipal Address(es)</b>	1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario
<b>Current Land Use</b>	Residential/Commercial
<b>Proposed Land Use</b>	Residential/Commercial
<b>Legal Description</b>	PT TWP LT 112 NIAGARA; PT RDAL BTN TWP LT 111 & 112 NIAGARA PT 1 30R668 & AS IN RO119545 EXCEPT PT 4 SPPL85; PT 2 30R668, RO164363, BLOCK 46831 S/T INTEREST OF THE MUNICIPALITY; NIAGARA-ON-THE-LAKE PT TWP LT 112 NIAGARA AS IN RO7678 EXCEPT HWY637; NIAGARA-ON-THE-LAKE
<b>Property Identification Number (PIN)</b>	46383-0086 (LT) 46383-0087 (LT)
<b>Approximate Universal Transverse Mercator (UTM) coordinates</b>	NAD83 17T 652530 m E 4786792 m N
<b>Accuracy Estimate of UTM</b>	10-15 m
<b>Measurement Method</b>	GPS
<b>Site Area</b>	1.07 hectares (2.66 acres)
<b>Property Owner</b>	Esfandiar Aghaei and On The Lake Developments Inc.
<b>Owner Contact Address</b>	Stephen Aghaei 3985 Highway 7 East, Suite 202 Markham, ON, L3R 2A2

## 1.2 Potentially Contaminating Activities and Areas of Potential Environmental Concern

A Phase One ESA, in accordance with O. Reg. 153/04, has been completed by EXP (dated October 7, 2024) for the Site. Several potentially contaminating activities (PCAs) were identified on-Site and within 250 m from the Phase One Property site boundaries. All PCAs that were identified within 250 m property are shown on Figure 2.

Each PCA was further evaluated to determine if the activity may be contributing to an area of potential environmental concern (APECs) at the Phase One Property. The potential for each PCA to result in an APEC was evaluated based on the nature of the activity, the proximity to the Site and the location of the PCA relative to the calculated groundwater flow direction to the northwest.

Figures 2 and 4 illustrate the PCAs and associated APECs, respectively. The PCAs are summarized as follows:

PCA Identifier	Address	Location of Activity (in relation to Site) <sup>(1)</sup>	Potentially Contaminating Activity (PCA) <sup>(2)</sup>	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
<b>Site (On-Site PCAs)</b>					
1	1544 Four Mile Creek Road	On-Site	#27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Based on the previous report and city directories, a marine repair shop operated in the on-Site garage from approximately 1964 until 2023.	Yes
2A	1544 Four Mile Creek Road	On-site	#30 - Importation of Fill Material of Unknown Quality	Based on the previous report, slag from the former General Motors Plant was historically imported to the northern portion of the Site.	Yes
2B	1544 Four Mile Creek Road	On-Site	#Other – De-icing Activities	Salting activities of roadways and nearby parking areas for the purpose of keeping pedestrian and vehicular traffic safe	Yes
3	1544 & 1546 Four Mile Creek Road	On-Site	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Based on the previous report, two (2) USTs were reportedly historically located southeast of the garage structure and west of the residential building.	Yes
4	1544 & 1546 Four Mile Creek Road	On-Site	#40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	Based on 1876 historic map, an orchard/vineyard was located at the southern portion of the Site.	Yes

PCA Identifier	Address	Location of Activity (in relation to Site) <sup>(1)</sup>	Potentially Contaminating Activity (PCA) <sup>(2)</sup>	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
5	1546 Four Mile Creek Road	On-Site	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Based on the previous report and current site inspection, vent/fill pipes were observed at the northern portion of the residential house, indicating a potential fuel oil AST/UST.	Yes
<b>Surrounding Properties (Off-Site PCAs)</b>					
6	n/a	30 metres east	#40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	Based on the aerial photographs, an orchard/vineyard was located east of the Site.	No, based on the cross-gradient location relative to the Site.
7	1579 Four Mile Creek Road	40 metres north	#40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	Based on the ERIS report and city directories, Niagara Fruit & Vegetable Growers Ltd. was listed as a wholesale pesticide vendor, and was located at the property between 2006 and 2023.	No, based on the cross-gradient location relative to the Site.
8a	1593 Four Mile Creek Road	70 metres northeast	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Based on the ERIS report, The Town of Niagara-on-the-Lake Works yard is registered as a private fuel outlet with two (2) gasoline USTs and one (1) diesel UST.	No, based on the cross-gradient location relative to the Site.
8b	3 Lorraine Street	70 metres northeast	#other - spill	Based on the ERIS report, two spills occurred at the Town Works Yard; an unknown volume of gasoline in 2008 and 50 litres of diesel in 1988.	No, based on the cross-gradient location relative to the Site.
8c	1593 Four Mile Creek Road/3 Lorraine Street	70 metres northeast	#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the ERIS report, this property was listed as a waste generator for the Town Works Yard (believed to be related to equipment repair activities) since 1986.	No, based on the cross-gradient location relative to the Site.

PCA Identifier	Address	Location of Activity (in relation to Site) <sup>(1)</sup>	Potentially Contaminating Activity (PCA) <sup>(2)</sup>	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
9	1593 Four Mile Creek Road	70 metres northeast	#58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners.	Based on the ERIS report, this property was listed as a waste generator for a waste collection operation since 2007.	No, based on the cross-gradient location relative to the Site.
10a	1487 Niagara Stone Road	145 metres north	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Based on the ERIS report and city directories, a gasoline station has been located at this property since 1988.	No, based on the cross-gradient location relative to the Site.
10b	Corner of Lorraine Road and Four Mile Creek Road	145 metres north	#other - spill	Based on the ERIS report, a gasoline spill of unknown volume occurred at the property.	No, based on the cross-gradient location relative to the Site.
10c	Lorraine Road and Four Mile Creek Road	145 metres north	#other - spill	Based on the ERIS report, a mercury spill occurred at this property.	No, based on the cross-gradient location relative to the Site.
11	7 Henegan Road, Niagara-On-The-Lake	155 meters west	#27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Based on the city directories, Whirlpool Jet Boat Tours has been located at the property since 2006. There is potential for boat maintenance and repair activities in the building.	No, based on the cross-gradient location relative to the Site.
12	11 Henegan Road, Niagara-On-The-Lake	160 metres west	#59 - Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Based on the city directories, multiple woodworking companies have been located at the property since 2006.	No, based on the downgradient location relative to the Site.
13	13 Henegan Road, Niagara-On-The-Lake	165 metres southwest	#59 - Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Based on the city directories, multiple woodworking companies have been located at the property since 2009.	No, based on the downgradient location relative to the Site.
14	15 Henegan Road, Niagara-On-The-Lake	220 metres southwest	#59 - Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Based on the city directories, Millbrook Cabinetry Inc. has been located at the property since 2006.	No, based on the downgradient location relative to the Site.

(1) Distances are approximate. Precise distances are not possible due to the age of some listings and the aggregation and/or loss of addresses.

(2) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg 153/04, as amended) that is occurring or has occurred in a phase one Study area.

The APECs, as presented in Figure 4, and the associated contaminants of potential concern (COPCs) in the media associated with the PCA were summarized and assessed as follows:

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA) <sup>1</sup>	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern <sup>2</sup>	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1: Former equipment and marine vehicle repairs	Central portion of the Site	PCA 1: #27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	On-Site	PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	Soil and Groundwater
APEC 2A: Importation of Fill Material	Northern portion of the Site	PCA 2: #30 - Importation of Fill Material of Unknown Quality	On-Site	PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg, EC, SAR, PCBs	Soil
APEC 2B: De-icing Activities	Northern portion of the Site	PCA 2B: #Other – De-icing Activities	On-Site	EC, SAR	Soil
APEC 3: Former USTs	South-Central portion of the Site	PCA 3: #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs, BTEX, VOCs, Metals, Sb, As, Se	Soil and Groundwater
APEC 4: Historical orchard/vineyard	Southern portion of the Site	PCA 4: #40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On-Site	OC Pesticides, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	Soil
APEC 5: Vent/fill pipes at residential structure	Southeastern portion of the Site	PCA 5: #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs, BTEX, PAHs, VOCs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	Soil and Groundwater

(1) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg.153/04, as amended) that is occurring or has occurred in a phase one Study area.

(2) PHCs – Petroleum Hydrocarbons; BTEX – Benzene, Toluene, Ethylbenzene, and Xylene; VOCs – Volatile Organic Compounds; PAHs – Polycyclic Aromatic Hydrocarbons; Metals – Metals (including Hydride Metals); ORPs – Other Regulated Parameters [EC - electrical conductivity; SAR - sodium adsorption ratio; Hg – mercury; CN – cyanide; B-HWS - boron (hot-water-soluble); CrVI - hexavalent chromium; and pH]; OC pesticides – Organochlorine pesticides; PCBs – polychlorinated biphenyls.

### 1.3 Underground Utilities

The Site utilities and services were identified at the Site based on information provided in environmental records, relevant utility infrastructure observed during the Site reconnaissance, and the information from the locates that were completed for the Site. The Site utilities are summarized as follows and noted on Figure 3, where available. The site is serviced by the following:

Utility	Source	Site Entry
Natural Gas	Enbridge Gas	Underground from Four Mile Creek Road
Sanitary Sewer	Town of Niagara-on-the-Lake	Underground from Four Mile Creek Road
Storm Sewer	Town of Niagara-on-the-Lake	Underground from Four Mile Creek Road
Water	Town of Niagara-on-the-Lake	Underground from Four Mile Creek Road
Electricity	Niagara-on-the-Lake Hydro Inc.	Underground / Overhead
Telecommunications	Bell, Rogers	Underground from Four Mile Creek Road

The subsurface structures or utilities may provide preferential pathway of the identified contaminants of concern (COCs) in groundwater at the Site. Given the minimum depth to groundwater identified on-Site of 0.41 metres below ground surface (mbgs), utility conduits may provide a preferential flow path for groundwater. However, given that no groundwater concentrations in exceedance of the MECP Table 9 SCS were identified at the Site, it is not anticipated that any contaminant plumes will travel along preferential pathways via utility lines.

## 2. Physical Site Description

### 2.1 Geological Conditions

The following physiographic, geological and soil maps were reviewed:

- Topographic Map available at the Natural Resources Canada (NRC) website <http://atlas.gc.ca/toporama/en/index.html>
- Make A Map: Natural Heritage Areas at Ontario Ministry of Natural Resources and Forestry website [https://www.lioapplications.lrc.gov.on.ca/Natural\\_Heritage/index.html?viewer=Natural\\_Heritage.Natural\\_Heritage&locale=en-CA](https://www.lioapplications.lrc.gov.on.ca/Natural_Heritage/index.html?viewer=Natural_Heritage.Natural_Heritage&locale=en-CA)
- "Quaternary Geology, Seamless coverage of the Province of Ontario"; Data Set 14 - Revised, Scale 1: 1,000,000 Issued 2000.
- "Bedrock Geology of Ontario, Southern Sheet," Ontario Geological Survey, MDR126-REV1. Scale 1:250,000. Issued 2011.
- 1876 Illustrated Historical Atlas of the Counties of Lincoln and Welland, Ont., Digital Library of McGill University.

Based on the review of the above maps, the following information was obtained:

- Based on the information available at this time, the direction of groundwater flow around the Site is to the northwest. Groundwater contour maps are presented in Figures 6A and 6B. The Lower Virgil Reservoir is located approximately 5 metres west of the Site. The Lower Virgil Reservoir is part of Four Mile Creek, which is located approximately 10 metres northwest of the Site, and flows north towards Lake Ontario.
- Based on the review of available resources from the Ministry of Natural Resources and Forestry website, a wetland is located northwest adjacent to the Site, extending slightly onto the Site. The wetland is associated with the Four Mile Creek. Based on conversations with Niagara region, the wetland does not encroach onto and is not located within 30m of the Site.

- The Site and surrounding areas are dominated by Iroquois Plain deposits that consist predominantly of clay to silt-textured till (derived from glaciolacustrine deposits or shale) with Modern alluvial deposits consisting of clay, silt, sand, and gravel in the western-most portion of the Site.
- The bedrock in the general area of the Site is part of a group belonging to the Queenston Formation, primarily consisting of shale, limestone, dolostone and siltstone.
- Based on the Ontario Geological Survey (OSG) Bedrock Geology Database, depth to bedrock at the Site is approximately 19 mbgs.
- According to the historical map, the Site was located within the property owned by John A. Wilson and was used for agricultural purposes including an orchard/vineyard at the southern portion.
- According to Schedule C of the *Town of Niagara-on-the-Lake Official Plan (2017)*, the Site is listed as a Service Commercial Area and is adjacent to a Conservation Area. The Site is included in a Wetlands Area (including adjacent lands) but based on conversations with Niagara Region, the wetland does not encroach onto and is not located within 30 m of the Site.

## 2.2 Stratigraphy

The general stratigraphy at the Site, as observed in the boreholes, consists of topsoil or granular fill, underlain by silty clay to sandy silt fill, overlying native layers of clayey silt, and silty clay till. Bedrock was not encountered at the borehole completion depths, to a maximum investigative depth of 11.28 mbgs.

### 2.2.1 Surface Material

Surficial topsoil was encountered at BH2, BH3, BH4, BH5, and BH7, with a thickness ranging from 50 to 150 mm. BH7 encountered approximately 200 mm of granular fill beneath the surficial topsoil layer.

BH1 was advanced in the gravel driveway and encountered approximately 250 and 450 mm of surficial granular fill.

The granular fill typically consisted of crushed limestone.

### 2.2.2 Topsoil

Topsoil material was encountered at all borehole locations beneath the surficial material, except for BH1, extending from approximately 0.8 to 9.14 mbgs. Topsoil material consisted of silty clay, gravelly sand, silty sand, or sandy silt, and was noted to contain trace to some organics, trace wood, brick, and asphalt fragments, and deleterious materials.

### 2.2.3 Native Material

A native deposit of silty clay was encountered at all borehole locations except for BH1, where a native sandy silt was encountered under granular fill, extending from 9.14 to the borehole termination depth of 11.28 mbgs. Native silty clay was encountered directly below topsoil at BH2 and BH3, extending from approximately 0.5 to the borehole termination depth of 8.2 mbgs, and was encountered at depths ranging from 0.75 to 7.6 mbgs in BH4, BH5, BH6, BH7, and BH8.

All boreholes were terminated in native material at depths ranging from 6.71 to 11.28 mbgs. No odour or staining was identified in the native material.

### 2.2.4 Bedrock

Bedrock was not encountered at the boreholes advanced at the Site to the maximum investigative depth of 11.28 mbgs

## 2.3 Hydrogeology

The monitoring well network consisted of six (6) monitoring wells (BH1-23, BH2-23, BH5-23, BH3, BH4 and BH7) screened within the topsoil material or native soils. On October 2, 2024, the measured depth of the groundwater table ranged from 0.41 (BH1-23) to 1.67 (BH2-23) mbgs; the calculated groundwater elevations ranged from 90.87 (BH2-23) to 92.24 (BH1-23) metres above

sea level (masl) in the groundwater monitors. On December 2, 2024, the measured depth of the groundwater table ranged from 0.7 (BH1-23/BH4) to 6.7 (BH3) mbgs; the calculated groundwater elevations ranged from 85.84 (BH3) to 91.95 (BH1-23) masl in the groundwater monitors. The calculated hydraulic gradient value for the monitoring wells was an average of 0.1 m/m to 0.01 m/m to the northwest.

Using a value of  $1.0 \times 10^{-7}$  m/s for the hydraulic conductivity of the, a calculated hydraulic gradient of 0.01 m/m, and 20% for effective porosity of clayey silt to silty clay (McWhorter and Sunada, 1977), Darcy’s Law calculations were made to determine the potential groundwater flow velocity at the Site. The groundwater flow velocity was calculated to be approximately 0.0016 metres per year in the water-bearing clayey silt to silty clay.

Taking into consideration surface water features in the surrounding area, the regional groundwater flow direction is inferred to be northwesterly. This is corroborated with the calculated groundwater contours, as shown in Figure 6A and 6B. Localized flow conditions across the site indicate a groundwater flow to the northwest in the unconfined clayey silt to silty clay aquifer.

All measurements of groundwater and liquid petroleum (if any) depth were made with a Solinst Model 122 oil/water interface probe. Both the probe and the measuring tape that came into contact with liquids within the monitor are cleaned with Alconox detergent, and then rinsed with distilled water and methanol and allowed to air dry after each measurement.

## 2.4 Site Sensitivity

The Site Sensitivity classification with respect to the conditions set out under Section 35, 41 and 43.1 of O. Reg. 153/04, as amended, were evaluated to determine if the Site is sensitive:

Sensitivity	Classification	Does Sensitivity Apply to Site?
Section 35 applies if	(i) The full depth generic site condition standards in a non-potable groundwater condition	Yes
	(ii) The stratified site condition standards in a non-potable groundwater condition	No
	(iii) The property, and all other properties located, in whole or in part, within 250 metres of the boundaries of the property, are supplied by a municipal drinking water system	Yes
	(iv) The record of site condition does not specify agricultural or other use as the type of property use	Yes
	(v) The property is located in an area designated in the municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater	No
	(vi) The property or one of the properties in the Phase Two/RSC study area has a well used or intended for use as a source of water for human consumption or agriculture.	No – confirmed during the non-potable request to Niagara Region where the one (1) domestic well listed in the Study Area was inspected and determined to not be in use.
	(vii) A person authorized by the owner of a property has given the clerk of the municipality a written notice of intention to apply the standards in preparing a record of site condition for the property;	Yes - Niagara Region provided a non-objection letter for use of

Sensitivity	Classification	Does Sensitivity Apply to Site?
	A. the single tier municipality has given written notice that it does not object to the application of the standards	non-potable standards on May 16, 2025
Section 41 applies if	(i) property is within an area of natural significance	No – confirmed by Niagara Region
	(ii) property includes or is adjacent to an area of natural significance or part of such an area	No – confirmed by Niagara Region
	(iii) property includes land that is within 30 m of an area of natural significance or part of such an area	No – confirmed by Niagara Region
	(iv) soil at property has a pH value for surface soil less than 5 or greater than 9	No
	(v) soil at property has a pH value for sub-surface soil less than 5 or greater than 11	No
	(vi) a qualified person is of the opinion that, given the characteristics of the property and the certifications the qualified person would be required to make in a record of site condition in relation to the property as specified in Schedule A, it is appropriate to apply this section to the property	No
Section 43.1 applies if	(i) property is a shallow soil property	No
	(ii) property includes all or part of a water body or is adjacent to a water body or includes land that is within 30 m of a water body	Yes

## 2.5 Areas on, in or under the Phase Two Property where Excess Soil is finally placed

Fill material was encountered during the investigation and is considered an APEC, and as such, the quality of the fill material was assessed (PCA 2a). No Excess Soil was imported from another property and placed on-Site during the Phase Two ESA or remediation investigations. However, during the remediation of PHC impacted soils at the Site in April of 2025, soils originating from the RSC property which were confirmed to be within the Table 9 SCS, were used to backfill the excavation.

## 2.6 Land Use

It is EXP’s understanding that the Client intends to re-develop the Site as mixed residential and commercial land use. Although conceptual plans were provided in draft at the time of this Phase Two ESA, it was assumed that two (2) buildings would be constructed: a forty (40) unit, four (4) storey residential condominium and a two (2) storey commercial building with retail and office space. No underground parking is proposed. However, at-grade parking is proposed for the central portion of the Site, between the two (2) proposed building structures.

# 3. Contaminants of Concern

## 3.1 Applicable Site Condition Standards

For assessment purposes, EXP selected the MECP (2011) Table 9: applicable to sites with non-potable groundwater and that are within 30 meters of a water body for Residential/Parkland/Institutional/Commercial/Community/Industrial (RPI/ICC) property use, and medium to fine textured soils (hereinafter referred to as the “Table 9 SCS”). The selection of this category was based on the following factors:

- As per the requirements of Section 43.1 of O. Reg. 153/04, a property is considered to be a “shallow soil property” if 1/3 or more of the property consists of soil equal to or less than 2 m in depth beneath the soil surface. More than 1/3 of the

boreholes advanced at the Site indicated an overburden thickness greater than 2 m, and as such, the Site is not considered as a “shallow soil property”;

- The Site was not considered as a sensitive Site as defined by O. Reg. 153/04 on the following basis:
  - The Site is located on or within 30 m of an area of natural significance as defined in O. Reg. 153/04. Based on the review of available resources from the Ministry of Natural Resources and Forestry website, a wetland is located northwest adjacent to the Site, extending slightly onto northern portion of the Site. The wetland is associated with Four Mile Creek. Based on discussions with Niagara Region, the wetland does not encroach onto and is not located within 30 m of the Site. Given their confirmation, it is not considered as part of the sensitivity of the Site.
  - Thirteen (13) surface soil samples and six (6) subsurface soil samples, including one (1) Quality Assurance and Quality Control (QA/QC) field duplicate (BH7-SS11 and BH7-S11-0), were submitted for pH analysis. The pH of all soil samples ranged from 6.87 to 11.4. A pH (surficial) outside of the range of 5-9 was identified in samples BH5-SS1 (depth of 0.0 to 0.61 mbgs) and BH1-SS1 (depth of 0.0 to 0.61 mbgs). However, three (3) additional soil samples (BH1A, BH1B, BH1C and BH5A, BH5B, BH5C) were obtained in the vicinity of these locations and from the same depth. When the logarithmic average was taken between the three (3) new samples and the original sample with elevated pH, the average was within 5-9 at both BH1 and BH5. As such, the 9 SCS can be applied to the Site; and,
  - The Site is located within 30 m of a water body.
- The stratigraphy of the Site predominantly consists of medium to fine textured soil, based on the borehole logs for the Site, where native soils were identified as silty clay to clayey silt;
- Based on the ERIS database records and Ontario Well Records, one (1) domestic well was identified within the study area. During inspections of the study area, it was confirmed that this well is no longer in use. A non-potable request was submitted to the Niagara Region on April 22, 2025. On May 16, 2025, the Niagara Region issued an approval letter to apply non-potable SCS to the Site. A copy of the approval letter is provided in Appendix K.
- The Site is located within 30 m of a water body, Four Mile Creek located to the west.
- The Site is intended to be utilized for mixed residential and commercial land use, with residential land use as the most sensitive land use; and,
- There was no intention to carry out a stratified restoration at the Site.

### 3.2 Areas of Contamination and Distribution of Contaminants

Subsurface investigations were completed to assess the impact of the PCAs on soil and groundwater within APECs on the Site. The screening of contaminants of concern (COC) was done by comparing the concentrations of potential contaminants of concern (PCOCs) in soil and groundwater with the Table 9 SCS. The potential soil COCs associated with the identified APECs are petroleum hydrocarbons (PHCs) including benzene, toluene, ethylbenzene and xylenes (collectively referred to as “BTEX”), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCs), polychlorinated biphenyls (PCBs), metals (including hydride-forming metals), other regulated parameters (ORPs) (including mercury (Hg), cyanide (CN-), boron [hot-water-soluble] (B-HWS), hexavalent chromium (Cr (VI)), pH, electrical conductivity (EC) and sodium adsorption ratio (SAR)). The potential groundwater COCs associated with the identified APECs are PHCs including BTEX, VOCs, PAHs, metals (including hydride-forming metals), ORPs (including Hg, CN, Cr (VI), sodium (Na) and chloride (Cl)). A summary of the assessment of APECs is provided as follows:

APEC	Location of APEC on Phase Two Property	PCA <sup>1</sup>	Location of PCA	COPC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 9 SCS)
APEC 1: Former equipment and marine vehicle repairs	Central portion of the Site	PCA 1: #27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	On-Site	Soil and Groundwater: PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	<p><u>Soil:</u> Two (2) soil samples and one (1) duplicate sample were submitted for PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg.</p> <p>Four (4) soil samples and one (1) duplicate were submitted for PHCs, BTEX, and VOCs.</p> <p><u>Groundwater:</u> <b>Round 1:</b> Three (3) groundwater samples (BH2-23, BH5-23, and BH4) and one (1) duplicate sample (BH5-23-0) were submitted for PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg.</p> <p><b>Round 2:</b> Two (2) groundwater samples (BH3, BH7) and one (1) duplicate (BH7-0) were submitted for PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-,</p>	<p><u>Soil:</u> Exceedances of PHC fraction F2 were identified at BH4, from a depth of 1.52 - 2.13 mbgs. This was vertically delineated to 6.05 mbgs. These soil exceedances have since been remediated.</p> <p><u>Groundwater:</u> No exceedances were identified in the soil samples.</p>

APEC	Location of APEC on Phase Two Property	PCA <sup>1</sup>	Location of PCA	COPC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 9 SCS)
					<p>Hg. One (1) groundwater sample (BH4) was submitted for PAHs, PHCs, BTEX. Two (2) groundwater samples (BH2-23, BH5-23) were submitted for Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg.</p> <p><b>Round 3:</b> One (1) groundwater sample (BH4) and one (1) duplicate (BH4-0) were submitted for PHCs, BTEX, PAHs. Three (3) groundwater sample (BH5-23, BH3, BH7) were submitted for Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg.</p>	
APEC 2A: Importation of Fill Material	Northern portion of the Site	PCA 2A: #30 - Importation of Fill Material of Unknown Quality	On-Site	Soil: PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg, EC, SAR, PCBs	<p><u>Soil:</u> Two (2) soil samples were submitted for PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg, and PCBs. Three (3) soil samples were submitted for EC and SAR.</p>	<p><u>Soil:</u> Exceedances of EC was identified at BH5 at 0.0 - 0.61 mbgs. This was vertically delineated to 6.09 mbgs.</p>
APEC 2B: Salting activities in winter months	Northern portion of the Site	PCA 2B: #Other – De-icing Activities	On-Site	Soil: EC, SAR	<p><u>Soil:</u> Two (2) soil samples were submitted for PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg, and PCBs. Three (3) soil samples were submitted for EC and SAR.</p>	<p><u>Soil:</u> Exceedances of EC was identified at BH5 at 0.0 - 0.61 mbgs. This was vertically delineated to 6.09 mbgs.</p>
APEC 3: Former USTs	South-Central portion of the Site	PCA 3: #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	Soil and Groundwater: PHCs, BTEX, VOCs, Metals, Sb, As, Se	<p><u>Soil:</u> Two (2) soil samples were submitted for PHCs, BTEX, and VOCs. One (1) soil</p>	<p><u>Soil:</u> Exceedances of PHC fraction F2 were identified at BH4, from a depth of 1.52 - 2.13 mbgs. This was</p>

APEC	Location of APEC on Phase Two Property	PCA <sup>1</sup>	Location of PCA	COPC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 9 SCS)
					<p>sample was submitted for Metals, Sb, As, Se.</p> <p><u>Groundwater:</u></p> <p><b>Round 1:</b> Two (2) groundwater samples (BH4, BH1-23) was submitted for PHCs, BTEX, VOCs, and Metals, Sb, As, Se.</p> <p><b>Round 2:</b> November: One (1) groundwater sample (BH4) was submitted for PHCs, BTEX.</p> <p><b>Round 3:</b> One (1) groundwater sample (BH4) and one (1) duplicate (BH4-0) were submitted for PHCs, BTEX.</p>	<p>vertically delineated to 6.05 mbgs. These soil exceedances have since been remediated.</p> <p><u>Groundwater:</u> No exceedances were identified in groundwater samples.</p>
APEC 4: Historical orchard/vineyard	Southern portion of the Site	PCA 4: #40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On-Site	Soil: OC Pesticides, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	<u>Soil:</u> Four (4) soil samples and one (1) duplicate were submitted for OC pesticides, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	<u>Soil:</u> No exceedances were identified in the soil samples.
APEC 5: Vent/fill pipes at residential structure	Southeastern portion of the Site	PCA 5: #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	Soil and Groundwater: PHCs, BTEX, PAHs, VOCs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg	<p><u>Soil:</u> Two (2) soil samples were submitted for PHCs, BTEX and VOCs.</p> <p>One (1) soil sample was submitted for PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN, Hg</p> <p><u>Groundwater:</u></p> <p><b>Round 1:</b> No groundwater sample was obtained</p>	<p><u>Soil:</u> No exceedances were identified in the soil samples.</p> <p><u>Groundwater:</u> No exceedances were identified in the groundwater samples.</p>

APEC	Location of APEC on Phase Two Property	PCA <sup>1</sup>	Location of PCA	COPC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 9 SCS)
					at BH3 given that it was dry during the investigation(s).  <b>Round 2:</b> One (1) groundwater sample (BH3) was submitted for PHCs, BTEX, VOCs, and Metals, Sb, As, Se.  <b>Round 3:</b> One (1) groundwater sample (BH3) was submitted for Metals, Sb, As, Se.	

(1) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O. Reg. 153/04, as amended) that is occurring or has occurred in a phase one Study area.

### 3.3 Soil COCs

Prior to remediation, soil was within the Table 9 SCS for all parameters analyzed with the exception of PHC fraction F2 at BH4, from 1.52 - 2.13 mbgs. The exceedance was vertically delineated to 6.09 mbgs, and horizontally delineated to BH3 to the east, BH7 to the northwest and BH2 to the northeast. These horizontal delineation samples were all obtained from 1.52 - 2.13 mbgs. The PHC exceedance is shown in plan view on Figure 7 and profile view on Figures 19A and 20A.

It is noted that elevated levels of EC were identified at BH5, however the elevated levels are related to the application of salting and de-icing substances in the parking lot and driveways for the purpose of snow and ice removal during the winter months. As per Section 2 of Ontario Regulation 339 of the Revised Regulations of Ontario, 1990 (Classes of Contaminants – Exceptions), and Part IX, Subsection 49.1 of Ontario Regulation 153/04, the concentrations of EC are deemed not to be exceedances of the applicable site condition standards if the exceedances are resulted from the application of de-icing substances in the winter months. As such, it is the Qualified Persons (QP<sub>ESA</sub>'s) opinion that the applicable Table 1 Standards for EC at the Site were exceeded solely because salt was used in the parking lot and laneways for the purpose of keeping the area safe for traffic under conditions of snow or ice or both, and therefore these parameters are not considered COCs. Elevated levels of EC are shown in plan view on Figure 11.

#### 3.3.1 Remedial Excavation and Confirmatory Soil Sampling

EXP supervised a construction and excavating company (Michael Brothers), during the remedial excavation activities. The remedial excavation was conducted on April 29, 2025. A track mounted excavator was used to excavate PHC impacted soils in the vicinity of boreholes BH1-2023, BH4, and the former UST. A Site Plan showing the excavated area is attached as Figure 5C. Confirmatory sampling locations are shown on Figure 7B and 7C.



The final excavation was rectangular in shape, measuring approximately 11 metres in length at its longest point, and 8 metres at its widest point and 3.0 metres at its maximum depth. Confirmatory soil samples were obtained from the final walls and floors of the excavation. A total of three (3) clean floor samples (F2, F3, and F5) and four (4) clean wall samples (N1, E2, S2, W2) were collected from the PHC remediation excavation. The confirmatory samples obtained from the final extents of the excavation on April 29, 2025 were within the Table 9 SCS and remediation of the soil PHC impacts at this location was considered complete. On April 29, 2025, a total of approximately 264 m<sup>3</sup> of excavated soil was directly loaded in trucks and disposed of at a licensed MECP facility. The excess soil was brought to York 1 Bethridge Transfer Station, located at 195 Bethridge Road, Toronto (ERO number 019-0305).

Soils originating from the RSC property which were confirmed to be within the Table 9 SCS, were used to backfill the excavation. The Soils were obtained from the northwest corner of the Site, tested at a frequency as indicated by O. Reg. 153/04 Schedule E, and then used to backfill the remediation excavation. No material was imported from off-Site.

Given that all PHC-impacted soils at the Site were excavated and removed during the remediation program, these soil contaminants are no longer present. Following the remediation activities, soils at the Site are now considered to meet the Table 9 SCS.

### 3.4 Groundwater COCs

Groundwater was within the Table 9 SCS for all parameters analyzed.

No evidence of free products was observed in groundwater during the investigation.

### 3.5 Sediment COC

No sediment was present at the Site. As such, sediment sampling was not conducted.

### 3.6 Mechanism of Discharge of Contaminants

The areas where each soil and groundwater COC group is present at concentrations above the Table 9 SCS pre-remediation, if applicable, are shown on Figures 7A and 11.

Table 6 below summarizes the COCs associated with the areas of contamination (AOCs).

**Table 6: Summary of COCs Associated with AOCs**

AOC Source(s)	Location	COCs in Excess of Table 1 SCS	Medium
<b>Associated with APEC 3</b>	South-central portion of Site	PHC Fraction F2	Soil

The PHC Fraction F2 exceedance identified in soil at BH4 and BH1-23 is likely associated with the historic UST formerly located on Site, located on the west side of the residential home and southeast of the garage. Soil impacts were all located adjacent to the former UST.

These PHC exceedances were removed during the soil remediation program conducted in April of 2025. The remediation plan is presented as Figure 5C and the confirmatory soil sampling locations and results are presented in Figure 7B and 7C. All soils remaining on the Site are considered to be within the Table 9 SCS. Given that contamination is no longer present at the Site, chemical transformations are not a consideration. Furthermore, the source of the previous PHC impacts, a UST, has been removed and decommissioned and as such the PHC soil contaminant source is no longer present.

### 3.7 Migration of Contaminants

Migration of contaminants in soil and groundwater via leaching of contamination to groundwater is a possible migration pathway. However, PHC impacts have been remediated to the Table 9 SCS and this migration pathway is not anticipated to be significant.

Current utilities may affect groundwater and soil vapour migration, However, PHC impacts have been remediated to the Table 9 SCS and this migration pathway is not anticipated to be significant.

### 3.8 Climatic and Meteorological Conditions Affecting Migration

As the soil impacted with has been removed/remediated to the Table 9 SCS, the influence of climatic or meteorological conditions that may influence contaminant distribution are no longer relevant.

### 3.9 Soil Vapour Intrusion

As the soil impacted with has been removed/remediated to the Table 9 SCS, soil vapour intrusion is not a concern for the current or proposed redevelopment.

## 4. Exposure Pathways

The human health conceptual site model (HHCSM) and ecological conceptual site model (ECSM), respectively, provide diagrams showing the contaminant sources, release and transport mechanisms, exposure routes, and possible receptors. The CSMs identify the complete exposure pathways where receptors might make direct contact with the COCs identified in soil and groundwater, or where they may indirectly be exposed to COCs in soil and groundwater via vapour transport or other pathways. Additionally, the CSM identifies pathways that are considered insignificant or negligible where the pathway may be incomplete or blocked.

### 4.1 Human Health Receptors and Exposure Pathways

The Site is currently occupied by a split-level residential home and a detached, formerly commercial garage. Although the development plan for the Site has yet to be finalized, it is understood that the Site is intended to be redeveloped for mixed residential and commercial land use, with two (2) buildings to be constructed: a forty (40) unit, four (4) storey residential condominium and a two (2) storey commercial building with retail and office space. No underground parking is proposed, at this time. However, at-grade parking is proposed for the central portion of the Site, between the two proposed building structures. Therefore, the receptors chosen for analysis are Site residents (toddlers and adults), Site visitors (recreational and trespassers [child and adult]), indoor workers, and outdoor workers (i.e. maintenance worker). Construction/subsurface utility workers may also be present during redevelopment of the Site.

Based on the soil COCs identified at the Site, prior to remediation, the possible routes of exposure for human receptors included the following:

- Indirect exposure to soil COCs through inhalation of soil/dust particles blown on-Site during high intensity soil works/development for on-Site residents, on-Site visitors, on-Site outdoor maintenance workers, and on-Site construction/subsurface utility workers;
- Direct exposure to soil COCs through dermal contact and incidental ingestion by on-Site residents, on-Site visitors, on-Site outdoor maintenance workers, and on-Site construction/subsurface utility workers;
- Indirect exposure to soil COCs via ingestion of garden produce by on-Site residents and on-Site visitors;
- Inhalation and vapour skin contact exposure to volatile COCs released to indoor air from soil for on-Site residents, on-Site visitors, and on-Site indoor workers;

- Inhalation and vapour skin contact exposure to volatile COCs released to outdoor air from soil for on-Site residents, on-Site visitors, and on-Site outdoor maintenance workers; and,
- Inhalation and vapour skin contact exposure to volatile COCs released to outdoor air (ground level) and trench air from soil for on-Site construction/subsurface utility workers.

Off-Site human receptors consist of the same receptors found on-Site. Possible routes of exposure for off-Site human receptors, prior to remediation, included the following:

- Indirect exposure to soil COCs through inhalation of soil/dust particles blown off-Site during high intensity soil works/development for off-Site residents, off-Site visitors, off-Site outdoor maintenance workers, and off-Site construction/subsurface utility workers;
- Inhalation and vapour skin contact exposure to volatile COCs released to indoor air from soil for off-Site residents, off-Site visitors, and off-Site indoor workers;
- Inhalation and vapour skin contact exposure to volatile COCs released to outdoor air from soil for off-Site residents, off-Site visitors, and off-Site outdoor maintenance workers;
- Inhalation and vapour skin contact exposure to volatile COCs released to outdoor air (ground level) and trench air from soil for off-Site construction/subsurface utility workers;
- Indirect contact to soil COCs via leaching to groundwater and subsequent dermal contact and incidental ingestion with surface water by off-Site recreational visitors and trespassers, and off-Site outdoor maintenance workers;
- Indirect contact to soil COCs via ingestion of fish by off-Site recreational visitors and trespassers; and,
- Indirect contact to soil COCs via dermal contact and incidental ingestion of sediment by off-Site recreational visitors and trespassers, and off-Site outdoor maintenance workers.

Given that no groundwater COCs have been identified, all potential groundwater pathways are considered incomplete.

The potential exposure routes for on- and off-Site human receptors under pre-remedial Site conditions were assessed, as shown on Figure 22A. It is noted that following the completion of the remedial activities completed at the RSC Property, no COCs were identified to remain in soil or are present in groundwater. As such, no exposure pathways are deemed to be complete at the Site (Figure 22B).

## 4.2 Ecological Receptors and Exposure Pathways

The selection of ecological receptors takes into consideration the location of the Site in an urban area and the location of the Lower Virgil Reservoir located approximately 5 metres west of the Site. The Lower Virgil Reservoir is part of the Four Mile Creek which is located approximately 10 metres northwest of the Site, and flows north towards Lake Ontario. Relevant on-Site receptors, as illustrated in the ECSM consist of terrestrial VECs such as plants, soil invertebrates, mammals, and birds.

Based on the soil COCs identified at the Site, prior to remediation, possible routes of exposure for on-Site ecological receptors included the following (as shown in Figure 23A):

- Direct exposure to soil COCs through dermal contact, incidental ingestion, and/or particulate inhalation by soil invertebrates and terrestrial wildlife;
- Direct exposure to soil COCs through root uptake by terrestrial plants;
- Ingestion of impacted food/prey by soil invertebrates and terrestrial mammals and birds;
- Indirect exposure to volatile COCs released from soil to outdoor air through atmospheric deposition by terrestrial plants; and,
- Indirect exposure to volatile COCs released from soil to outdoor air through inhalation and dermal contact by soil invertebrates and terrestrial wildlife.

Off-Site ecological receptors consist of the same terrestrial receptors found on-Site. Furthermore, the MECP evaluates exposure to aquatic receptors at properties within 5 km of a surface water body. Given that the nearest surface water feature is the Lower Virgil Reservoir located approximately 5 metres west of the Site, aquatic receptors are also considered. Relevant exposure pathways for off-Site aquatic receptors include aquatic plants, aquatic invertebrates, aquatic birds and mammals, amphibians and fish. Off-site exposure routes, prior to remediation, included the following (as shown in Figure 23A):

- Direct exposure to soil COCs through particulate inhalation by terrestrial birds and mammals;
- Indirect exposure to volatile COCs released from soil to outdoor air through atmospheric deposition by terrestrial plants;
- Indirect exposure to volatile COCs released from soil to outdoor air through inhalation and dermal contact by soil invertebrates and terrestrial wildlife;
- Indirect exposure through ingestion of impacted plant and animal tissue by soil invertebrates, terrestrial birds and mammals, aquatic invertebrates, aquatic birds and mammals, amphibians and fish;
- Direct exposure to surface water through root uptake by aquatic plants;
- Direct exposure to surface water through dermal contact and ingestion by terrestrial birds and mammals, aquatic invertebrates, aquatic birds and mammals, amphibians and fish;
- Direct exposure to surface water through gill intake by aquatic invertebrates, amphibians and fish;
- Direct exposure to sediment through root uptake by aquatic plants; and,
- Direct exposure to sediment through dermal contact and incidental ingestion by terrestrial birds and mammals, aquatic invertebrates, aquatic birds and mammals, amphibians and fish.

Given that no groundwater COCs have been identified, all potential groundwater pathways are considered incomplete.

The potential exposure routes for on- and off-Site ecological receptors under pre-remedial Site conditions are summarized in Figure 23A. It is noted that following the completion of the remedial activities completed at the RSC Property, no COCs were identified to remain in soil or are present in groundwater. As such, no exposure pathways are deemed to be complete at the Site (Figure 23B).

## 5. Uncertainty in the Phase Two Investigation

The investigation undertaken by EXP, and any conclusions or recommendations resulting from the work, reflect EXP's judgment based on the Site conditions observed at the time of EXP's site inspections and on information available at the time of preparation of the work. EXP has confirmed neither the completeness nor the accuracy of the records that were provided by others; as such, the historical records review is identified as a potential source of uncertainty during the investigation. The CSM is developed using multiple lines of evidence, searches and source information to make every reasonable attempt to ensure that findings of environmental significance are captured.

Any uncertainty or absence of information in the records review, interviews, and site reconnaissance components of the Phase One investigation, or any uncertainty or absence of information within the Phase Two or subsequent investigations, are not anticipated to materially affect the validity of the Phase Two CSM.

## 6. References

- Atlas of Canada Topographic Map (also known as Toporama) found on the Natural Resources Canada website at <http://atlas.nrcan.gc.ca/site/english/maps/topo/map>
- Brennand, T.A., Moore, A., Logan, C., Kenny, F., Russell, H.A.J., Sharpe, D.R. and Barnett, P.J., *Bedrock Topography of the Greater Toronto & Oak Ridges Moraine Areas, southern Ontario; Geological Survey of Canada*, Geological Survey of Canada Open File 3419, scale 1:200,000; 1998.
- Chapman, L.J. and D.F. Putnam, *The Physiography of Southern Ontario*, Third Edition, Ontario Ministry of Natural Resources, 1984.
- EXP Service Inc., Phase One Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, dated October 7, 2024.
- EXP Service Inc., Phase Two Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, dated November 7, 2024.
- EXP Service Inc., Phase Two Environmental Site Assessment Update, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, dated May 26, 2025.
- Englobe Corp., Phase I Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, dated September 30, 2021.
- Freeze, R.A. and J.A. Cherry, *Groundwater*, Prentice-Hall of Canada Ltd., 1979.
- Google Earth, Version 6.1.0.5001 (<http://www.google.com/earth/index.html>).
- Oak Ridges Moraine Groundwater Program Public Mapping Portal (<https://maps.oakridgeswater.ca/Html5Viewer/index.html?viewer=ORMGPP>).
- McWhorter, D.B. and D.K. Sunada, *Groundwater Hydrology and Hydraulics*, Water Resources Publications, 1977.
- Ontario Geological Survey, *Bedrock Geology of Ontario, Southern Sheet, Ontario Geological Survey Map 2544*, Scale 1:1,000,000, 1991.
- Ontario Ministry of the Environment, Conservation and Parks, Access Environment website (<http://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action?search=basic&lang=en>).
- Ontario Ministry of the Environment, Conservation and Parks, Brownfields Registry website (<http://www.ontario.ca/environment-and-energy/brownfields-redevelopment>).
- Ontario Ministry of the Environment, Conservation and Parks, Species at Risk in Ontario website (<https://www.ontario.ca/page/species-risk-ontario>).
- Ontario Ministry of Natural Resources and Forestry, Heritage Areas Map, ([http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR\\_NHLUPS\\_NaturalHeritage&viewer=NaturalHeritage&locale=en-US](http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US)).
- Ontario Regulation 153/04 made under Part XV.1 of the *Environmental Protection Act*, July 1, 2011.

- Paterson Group, Phase I-II Environmental Site Assessment, 1544 and 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, dated November 17, 2023.
- Resource Productivity & Recovery Authority, Hazardous Waste Program Registered Generators website (<https://hazardouswaste-registrations.rpra.ca/s/>)
- Sharpe, D.R., *Quaternary Geology of Toronto and Surrounding Area, Ontario Geological Survey Preliminary Map P. 2204*, Geological Series, scale 1:100,000, 1980.

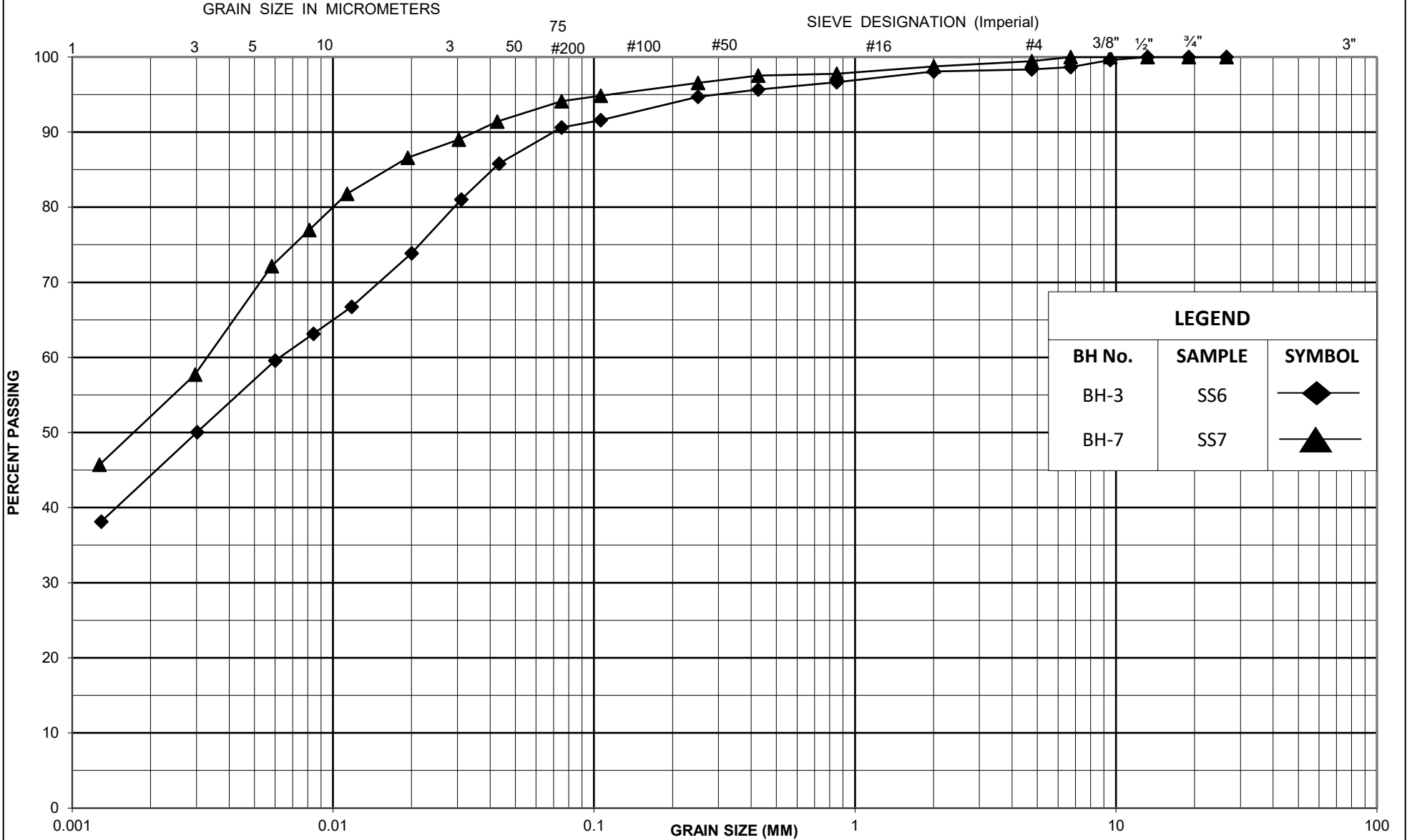
EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Appendix I – Grain Size Analysis

ISSMFE SOIL CLASSIFICATION SYSTEM

CLAY	SILT			SAND			GRAVEL			Cobbles
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	



LEGEND		
BH No.	SAMPLE	SYMBOL
BH-3	SS6	◆
BH-7	SS7	▲



GRAIN SIZE DISTRIBUTION

DRAWING NO.:	B1
PROJECT NO.:	HAM-24000672-A0
DATE:	JANUARY 2025

EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Appendix J – Remediation Report



## Remediation Report

1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

**Client:**

Times Group Corp.

**Attention:**

Stephen Aghaei

**Type of Document:**

FINAL

**Project Name:**

Remediation Report, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

**Project Number:**

GTR-24000672-B0

EXP Services Inc.

220 Commerce Valley Drive West, Suite 110

Markham, ON, L3T 0A8

t: 905.695.3217

**Date Submitted:**

2025-May-9

## Table of Contents

1. Legal Notification .....	3
2. Executive Summary .....	4
3 Introduction .....	6
3.1 Site Description .....	6
3.2 Legal Description and Property Ownership .....	7
3.3 Current and Proposed Future Uses.....	7
3.4 Applicable site Condition Standards .....	8
4 Remediation.....	9
4.1 Description of Excavation Activities.....	9
4.2 Description of Ground Water Treatment Activities.....	9
4.3 Description of Sediment Treatment Activities.....	9
5 Remedial Actions and Confirmatory Soil Sampling .....	10
5.1 Remediation.....	10
6. Quality Assurance and Quality Control.....	11
7. Conclusions .....	12
8 Closure .....	13
9 References .....	14

## List of Appendices

Figures

Tables

Appendix A: Limitation and Use of Report

Appendix B: Certificates of Analysis

Appendix C: Survey Plan

Appendix D: Soil Disposal Records

Appendix E: Backfill Material Analytical Results

## List of Figures and Table:

Figure 1: Site Location Plan

Figure 2: Site Plan

Figure 3: Remediation Areas Location Plan

Figure 4: Remedial Excavation– Petroleum Hydrocarbons (PHCs)

Figure 5: Soil Analytical Results – Petroleum Hydrocarbons (PHCs), Post-remediation

Table I: Petroleum Hydrocarbons in Soil

## 1. Legal Notification

This report was prepared by EXP Services Inc. (EXP) for the account of **Times Group Corp.**

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

## 2. Executive Summary

The executive summary is a brief synopsis of the report and should not be read in lieu of reading the report in its entirety. EXP Services Inc. (EXP) was retained by Times Group Corp. to conduct a Remedial Excavation and Confirmatory Sampling Program at the property with the municipal address of 1544 and 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, hereinafter referred to as the 'Site'.

The objective of the Remedial Excavation and Confirmatory Sampling Program was to fully delineate soil impacts, and remediate all identified petroleum hydrocarbons (PHCs) soil impacts on-Site for due diligence purposes. It is EXP's understanding that a Record of Site Condition (RSC) is required for the Site, given the change from a commercial (the least sensitive current land use) to residential use (the most sensitive proposed future land use). As such, the remediation work will be conducted to Ontario Regulation (O.Reg.) 153/04 standards in order to support an RSC.

The Ontario Regulation (O. Reg.) 153/04 Table 8: Full Depth Background Site Condition Standards (SCS) within 30 m of a Water Body in a Potable Groundwater Condition for residential/parkland/institutional/industrial/commercial/community Land Use and coarse and/or fine textured soil (Table 8 SCS) were deemed appropriate for evaluating conditions at the subject property for the purposes of remediation. EXP submitted a request to the Niagara Region on April 24, 2025 to use non-potable SCS at the Site. If approval is received by the Region, the Table 9 SCS would be applicable to the Site. As such, the confirmatory soil sampling as part of the PHC remediation was compared to both Table 8 and 9 SCS.

The following investigations were completed for the Site, and reviewed in preparation of this remediation:

- Englobe Corp., Phase I Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, dated September 30, 2021.
- Paterson Group, Phase I-II Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara on the Lake, Ontario, dated November 17, 2023.
- EXP Services Inc., Phase One Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara on the Lake, Ontario, dated October 7, 2024.
- EXP Services Inc., Phase Two Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara on the Lake, Ontario, revised April 9, 2025.

Phase I and One ESA investigations were carried out by Englobe in 2021, Paterson Group in 2023, and EXP in 2024. The following environmental concerns with the potential to have impacted the Site were identified;

- The current and historic use of the property as a service garage for construction and marine vehicles.
- The presence of former underground-ground storage tanks (USTs) on the exterior of the garage.
- Historical evidence of importation of fill of poor quality at the northern portion of the Site.
- Evidence of a tank to the north of the current residential dwelling.
- Salting and de-icing activities across the entirety of the Site.
- Evidence of historical orchards at the southern portion of the Site.

Based on these above noted concerns Phase II and Two ESAs were recommended and completed in 2023 by Paterson Group, and in 2024/2025 by EXP. The following work was completed during the Phase II ESA in 2023:

- Five (5) boreholes (BH1-23 to BH5-23) were advanced on the Phase I Property on September 25, 2023. A total of five (5) soil samples were submitted to Paracel Laboratories for analysis of a combination of one or more of metals, pH,

polycyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene, and xylenes (BTEX), and petroleum hydrocarbons (PHCs).

- One of the analyzed samples (BH1-SS3), taken from 1.8 to 2.1 metres, was found to have concentrations of PHCs above the Ministry of Environment, Conservation and Parks (MECP) Table 8 SCS. Based on the placement of BH1-23 as well as olfactory observations made, the identified contamination is likely related to the former underground storage tank (UST) associated with the garage and residential dwelling.
- Groundwater monitoring wells were constructed in three (3) of the five (5) boreholes (BH1-23, BH2-23, and BH5-23) to assess groundwater quality beneath the Site. The samples were analyzed for PHCs, PAHs, and volatile organic compounds (VOCs). BH2 was not sampled during the investigation. The groundwater samples from BH1-23 and BH5-23 were within the MECP Table 8 SCS.

EXP conducted a Phase Two ESA in 2024/2025 with the following findings:

- Between September 24 to 26, 2024 a total of eight (8) boreholes (BH1 to BH8) were advanced at the Site to a maximum depth of 11.28 metres below ground surface (m bgs) by a licensed well contractor, Terra Firma Environmental Services Ltd. (Terra Firma), under the full-time supervision of EXP staff. Three (3) of the boreholes were instrumented with groundwater monitoring wells (BH3, BH4, and BH7), installed for environmental purposes. Please note that the drilling investigation was carried out as part of a combined geotechnical/environmental/hydrogeological investigation and that not all borehole locations were sampled for environmental purposes.
- Soil samples were submitted for the analysis of PHCs, BTEX, volatile organic compounds (VOCs), PAHs, polychlorinated biphenyls (PCBs), organochlorine pesticides (OCPs), metals (including hydrides), and/or other regulated parameters (ORPs) (boron-hot water soluble (B-HWS), hexavalent chromium (Cr (VI)), mercury (Hg), cyanide (CN), electrical conductivity (EC), sodium adsorption ratio (SAR), pH). All soil parameters were either non-detect or detected below the applicable Table 1 and 8 SCS with the exception of EC and PHCs, as follows:
  - Exceedances of PHC fraction F2 at BH4-SS3 (depth of 1.52 to 2.13 m bgs). A deeper sample from this location, BH4-SS7 (depth of 6.09 to 6.70 m bgs), was found to be within the Table 1 and 8 SCS for PHCs.
  - Exceedance of EC at BH5-SS1 (depth of 0.0 - 0.61 m bgs). A deeper sample from this location, BH5-SS7 (depth of 6.09 to 6.70 m bgs), was found to be within the Table 1 and 8 SCS for EC.

Based on the reported analytical results, an exceedance of EC was identified at the Site. It is the Qualified Person's (QP's) opinion that the elevated concentration of EC is associated with de-icing and salting substances routinely applied on-site during the winter months for vehicular and pedestrian safety. Therefore, as per Section 49.1 (1) of O. Reg. 153/04, which references Section 2 of Ontario Regulation 339 of the Revised Regulations of Ontario, 1990 (Classes of Contaminants – Exceptions), it is in the QP<sub>ESA</sub>'s opinion that the elevated levels of EC are not exceedances of the applicable SCS.

The findings of all the investigations conducted at the Site, data indicated the following areas requiring remediation:

- Two (2) samples, BH1-SS3, taken from 1.8 to 2.1 metres and BH4-SS3, taken from a depth of 1.53 to 2.13 were found to have concentrations of PHCs, above the Ministry of Environment, Conservation and Parks (MECP) Table 1, 8 and 9 SCS. Based on the placement of these impacts, the identified contamination is likely related to the former UST.

On April 29, 2025, a total of 439.51 tonnes (approximately 264 m<sup>3</sup>) of excavated soil was directly loaded in trucks and disposed of at a licensed MECP Facility. The soil was brought to York 1 Bethridge Transfer Station, located at 195 Bethridge Road, Toronto (ERO number 019-0305 ). Confirmatory soil sampling was conducted along the floors and walls of the final excavation, to determine the quality of soil remaining on-Site, at a frequency indicated by O. Reg. 153/04 Schedule E, Table 3, *Minimum*

*Confirmation Sampling Requirements for Excavation.* Soil samples were analyzed by an accredited laboratory (AGAT Laboratories) for PHC fractions F1 to F4.

All final confirmatory floor and wall samples obtained from the Site were determined to be within the MECP Table 1, 8 and 9 SCS for residential/parkland/institutional land use and all textured soils. As such, remediation of PHC impacts beneath the Site is determined to be complete.

The excavation was backfilled with material from on-Site. Backfill material was analyzed by an accredited laboratory for PHCs, benzene, toluene, ethylbenzene and xylene (BTEX), VOCs, PAHs, and metals including hydride forming metals. Given that approximately 264 m<sup>3</sup> of soils were being used as backfill, EXP obtained five (5) samples and one (1) duplicate sample from the stockpiled backfill material. The results were within the Table 1, 8 and 9 SCS. The analytical results from the backfill material are provided in Appendix E.

### 3 Introduction

EXP Services Inc. (EXP) was retained by Times Group Corp. to conduct a Remedial Excavation and Confirmatory Sampling Program at the property with the municipal address of 1544 and 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, hereinafter referred to as the 'Site'.

The objective of the Remedial Excavation and Confirmatory Sampling Program was to fully delineate soil impacts, and remediate all identified petroleum hydrocarbons (PHCs) soil impacts on-Site for due diligence purposes. It is EXP's understanding that an Record of Site Condition (RSC) is required. As such, the remediation work will be conducted to Ontario Regulation (O.Reg.) 153/04 standards in order to support an RSC filing.

The Ontario Regulation (O. Reg.) 153/04 Table 8: Full Depth Background Site Condition Standards (SCS) within 30 m of a Water Body in a Potable Groundwater Condition for residential/parkland/institutional/industrial/commercial/community Land Use all coarse and/or fine textured soil (Table 8 SCS) were deemed appropriate for evaluating conditions at the subject property for the purposes of remediation. EXP submitted a request to the Niagara Region on April 24, 2025 to use non-potable SCS at the Site. If approval is received by the Region, the Table 9 SCS would be applicable to the Site. As such, the confirmatory soil sampling as part of the PHC remediation was compared to both Table 8 and 9 SCS.

Based on the Phase II investigation by Paterson Group completed in 2023 and EXP's 2024/2025 Phase Two ESA, the findings indicated the following area requiring remediation:

- Two (2) samples, BH1-SS3, taken from 1.8 to 2.1 metres and BH4-SS3, taken from a depth of 1.53 to 2.13 were found to have concentrations of PHCs, above the Ministry of Environment, Conservation and Parks (MECP) Table 1, 8 and 9 SCS. Based on the placement of these impacts, the identified contamination is likely related to the former UST.

Based on the above-noted information the impacted soil will need to be excavated and removed from the Site. This remediation program only addresses the PHC impacts identified in soil, located at the southern portion of the Site, behind the current residential dwelling.

#### 3.1 Site Description

The Site is located on the west side of Four Mile Creek Road and approximately 210 metres southwest of Niagara Stone Road in Niagara-on-the-Lake, as shown on Figure 1. The Site has an area of approximately 1.06 hectares (2.62 acres) and currently consists of one (1) residential structure in the southeastern portion and one (1) vacant garage structure (formerly used for marine

vehicle repairs) in the central portion. Surrounding properties are predominantly residential, with some commercial properties to the north, and Four Mile Creek to the west.

The Site is currently occupied by a split-level residential home and a detached, formerly commercial garage. The Site was first developed for mixed commercial and residential use in the 1960s and historically has been used as a garage for construction and maintenance of marine vehicles. An UST was located at the exterior of the garage. The intended redevelopment plans include a commercial plaza and a four-storey residential apartment complex. No underground levels are currently proposed; however, plans have not been finalized at this time.

### 3.2 Legal Description and Property Ownership

At the time of the Phase Two investigation, the Site was occupied by a split-level residential home and a detached, formerly commercial garage.

Details of the site are as follows:

<b>Municipal Address(es)</b>	1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario
<b>Current Land Use</b>	Residential/Commercial
<b>Proposed Land Use</b>	Residential/Commercial
<b>Legal Description</b>	PT TWP LT 112 NIAGARA; PT RDAL BTN TWP LT 111 & 112 NIAGARA PT 1 30R668 & AS IN RO119545 EXCEPT PT 4 SPPL85; PT 2 30R668, RO164363, BLOCK 46831 S/T INTEREST OF THE MUNICIPALITY; NIAGARA-ON-THE-LAKE PT TWP LT 112 NIAGARA AS IN RO7678 EXCEPT HWY637; NIAGARA-ON-THE-LAKE
<b>Property Identification Number (PIN)</b>	46383-0086 (LT) 46383-0087 (LT)
<b>Approximate Universal Transverse Mercator (UTM) coordinates</b>	NAD83 17T 652530 m E 4786792 m N
<b>Accuracy Estimate of UTM</b>	10-15 m
<b>Measurement Method</b>	GPS
<b>Site Area</b>	1.07 hectares (2.66 acres)
<b>Property Owner</b>	Esfandiar Aghaei and On The Lake Developments Inc.
<b>Owner Contact Address</b>	Stephen Aghaei 3985 Highway 7 East, Suite 202 Markham, ON, L3R 2A2

A signed Plan of Survey, prepared by Baric Grenkie Suveying Ltd., dated January 26, 2024, is included in Appendix C.

### 3.3 Current and Proposed Future Uses

The Site was first developed for mixed commercial and residential use in the 1960s and historically has been used as a garage for construction and maintenance of marine vehicles. An UST was located at the exterior of the garage. At the time of the remediation program, the Site was occupied by a split-level residential home and a detached, formerly commercial garage. The remainder of the Site consisted of an asphalt parking lot and landscaped areas.

The intended redevelopment plans include a commercial plaza and a four-storey residential apartment complex. No underground levels are currently proposed; however, plans have not been finalized at this time.

### 3.4 Applicable site Condition Standards

Analytical results obtained for site soil and groundwater samples were assessed against Site Condition Standards (SCS) as established under subsection 169.4(1) of the Environmental Protection Act, and presented in the document MECP “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act”, (“SGWS” Standards), (MECP, 2011). Tabulated background SCS (Table 1) applicable to environmentally sensitive sites and effects based generic SCS (Tables 2 to 9) applicable to non-environmentally sensitive sites are provided in MECP (2011). The effects based SCS (Tables 2 to 9) are protective of human health and the environment for different groundwater conditions (potable and non-potable), land use scenarios (residential, parkland, institutional, commercial, industrial, community and agricultural/other), soil texture (coarse or medium/fine) and restoration depth (full or stratified).

Tables 1 to 9 of MECP Standards are summarized as follows:

- Table 1 – applicable to sites where background concentrations must be met (full depth), such as sensitive sites where site-specific criteria have not been derived;
- Table 2 – applicable to sites with potable groundwater and full depth restoration;
- Table 3 – applicable to sites with non-potable groundwater and full depth restoration;
- Table 4 – applicable to sites with potable groundwater and stratified restoration;
- Table 5 – applicable to sites with non-potable groundwater and stratified restoration;
- Table 6 – applicable to sites with potable groundwater and shallow soils;
- Table 7 – applicable to sites with non-potable groundwater and shallow soils;
- Table 8 – applicable to sites with potable groundwater and that are within 30 m of a water body; and,
- Table 9 – applicable to sites with non-potable groundwater and that are within 30 meters (m) of a water body.

For assessment purposes, EXP selected the MECP (2011) Table 8 Full Depth Background SCS for a residential/parkland/institutional/commercial/community/industrial land use and coarse and/or medium-fine textured soils (hereinafter referred to as the “Table 8 SCS”). The selection of this category was based on the following factors:

- As per the requirements of Section 43.1 of O. Reg. 153/04, a property is considered to be a “shallow soil property” if 1/3 or more of the property consists of soil equal to or less than 2 m in depth beneath the soil surface. More than 1/3 of the boreholes advanced at the site indicated an overburden thickness greater than 2 m, and as such, the site is not considered as a “shallow soil property”;
- The Site was not considered as a sensitive Site as defined by O. Reg. 153/04 on the following basis:
  - The Site is not located on or within 30 m of an area of natural significance as defined in O. Reg. 153/04. Based on the review of available resources from the Ministry of Natural Resources and Forestry website, a wetland is located northwest adjacent to the Site, extending slightly onto northern portion of the Site. The wetland is associated with Four Mile Creek. Based on discussions with Niagara Region, the wetland does not encroach onto and is not located within 30 m of the Site. Given their confirmation, it is not considered as part of the sensitivity of the Site.
  - Thirteen (13) surface soil samples and six (6) subsurface soil samples, including one (1) Quality Assurance and Quality Control (QA/QC) field duplicate (BH7-S11-0), were submitted for pH analysis. The pH of all soil samples ranged from 6.87 to 11.4. A pH outside of the range of 5-9 in surficial soils (less than 1.5 m bgs) was identified in samples BH5-SS1 (depth of 0.0 to 0.61 m bgs) and BH1-SS1 (depth of 0.0 to 0.61 m bgs). However, three (3) additional soil samples

at each location (BH1A, BH1B, BH1C and BH5A, BH5B, BH5C) were obtained within 1 m of these samples and from the same depth. When the logarithmic average was taken between the three (3) new samples and the original sample with elevated pH, the average was within 5 to 9. As such, the Table 8 or 9 SCS can be applied to the Site; and,

- The Site is located within 30 m of a water body; Four Mile Creek is located 5 to 10 m to the west of the Site .
- The stratigraphy of the Site predominantly consists of medium to fine textured soil, based on the borehole logs for the Site, where native soils were identified as silty clay to clayey silt; however, the Table 8 and 9 SCS are not specific to soil texture;
- Based on the ERIS database records and Ontario Well Records, one (1) domestic well was identified within the study area. EXP submitted a request to the Niagara Region to use non-potable SCS at the Site on April 24, 2025. If approval is received by the Region, the Table 9 SCS would be applicable to the Site;
- The Site is intended to be utilized for mixed residential and commercial land use, with residential land use as the most sensitive land use; and,
- There was no intention to carry out a stratified restoration at the site.

## 4 Remediation

### 4.1 Description of Excavation Activities

EXP supervised a construction and excavating company, Michael Brothers Excavating, retained by the Client, during the remedial excavation activities. The remedial excavation was conducted on April 29, 2025. A track mounted excavator was used to excavate PHC impacted soils in the vicinity of boreholes BH1-2023, BH4, and the former UST. A Site Plan showing the excavated area is attached as Figure 3. Confirmatory sampling locations are shown on Figure 4.

EXP performed the remedial work following the requirements of O. Reg. 153/04, Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario (MOE, 1996), and in accordance with generally accepted professional practices.

Confirmatory soil sampling was completed at the walls and floors of the final extents of the excavation, as indicated in Section 5. The analytical results from the confirmatory soil sampling are presented in Table I.

On April 29, 2025, a total of approximately 264 m<sup>3</sup> of excavated soil was directly loaded in trucks and disposed of at a licensed MECP facility. The excess soil was brought to York 1 Bethridge Transfer Station, located at 195 Bethridge Road, Toronto (ERO number 019-0305).

### 4.2 Description of Ground Water Treatment Activities

Groundwater treatment was not part of the scope of this remediation program. Furthermore, no groundwater was encountered during the excavation activities outlined in Section 4.1. Free-flowing liquid petroleum product was also not observed during the earthworks activities.

### 4.3 Description of Sediment Treatment Activities

As no sediment was present at the Site, no sediment removal or treatment activities were required.

## 5 Remedial Actions and Confirmatory Soil Sampling

### 5.1 Remediation

The objectives of the remediation program are as follows:

1. Excavating PHC impacted soil at boreholes BH1-2023 and BH4, and in the vicinity of the former UST.
1. Complete confirmatory soil sampling at the extents of the excavation, until determined to be within the Table 8 and 9 SCS.
2. The total area of PHC impacted soil was approximately 88 m<sup>2</sup> and extended to a depth of 3.0 m bgs. As such, the total volume of PHC impacted soils exceeding the Table 8 and 9 criteria, and exported off-Site, is approximately 264 m<sup>3</sup> from this location.

The final excavation was rectangular in shape, measuring approximately 11 metres in length at its longest point, and 8 metres at its widest point and 3.0 metres at its maximum depth. Confirmatory soil samples were obtained from the final walls and floors of the excavation. A total of three (3) clean floor samples (F2, F3, and F5) and four (4) clean wall samples (N1, E2, S2, W2) were collected from the PHC remediation excavation. The confirmatory samples obtained from the final extents of the excavation on April 29, 2025 were within the Table 8 and 9 SCS and remediation of the soil PHC impacts at this location was considered complete.

A figure showing sampling locations within the PHC remediation excavation is provided as Figure 4. The analytical results from the confirmatory soil sampling are provided in Table I.

## 6. Quality Assurance and Quality Control

EXP followed standard operating procedures (SOPs) and Quality Assurance and Quality Control (QA/QC) measures to ensure defined quality standards were met; there were no deviations from the associated SOPs.

One (1) field duplicate soil sample was collected and analyzed for the same parameters as the original sample:

- E22 (Duplicate of wall sample E2) was collected and analyzed for PHC fractions F1 to F4.

The duplicate sample is shown in Table I.

The precision of the analytical results can be expressed by the relative percent difference (RPD) between the original sample and the duplicate sample. The equation used to determine the RPD is provided below.

$$\text{RPD} = 2 \times (|(S-D)| / (S+D)) \times 100$$

Where,  
 S = concentration of the original sample  
 D = concentration of the duplicate sample

RPDs can only be calculated if the concentration of both the duplicate sample and the original sample are above the analytical reporting detection limit (RDL). No RPD exceedances were identified between the original and duplicate soil sample (E2 and E22).

AGAT did not provide any comments or remarks on the Certificates of Analysis regarding the validity of the results for any of the samples analyzed.

## 7. Conclusions

Based on the findings from previous Phase II/Two investigations (Patterson Group, 2023; EXP, 2025), data indicated the following areas requiring remediation:

- Two (2) samples, BH1-SS3, taken from 1.8 to 2.1 metres and BH4-SS3, taken from a depth of 1.53 to 2.13 were found to have concentrations of PHCs, above the Ministry of Environment, Conservation and Parks (MECP) Table 1, 8 and 9 SCS. Based on the placement of these impacts, the identified contamination is likely related to the former UST.

The remediation program was conducted in locations which were determined to exceed the Table 8 and 9 SCS for PHCs. Please note that this remediation program only addresses PHC fraction F1 to F4 soil impacts identified on-Site, in the vicinity of the former UST.

On April 29, 2025, a total of 439.51 tonnes (approximately 264 m<sup>3</sup>) of excavated soil was directly loaded in trucks and disposed of at a licensed MECP Facility. The soil was brought to York 1 Bethridge Transfer Station, located at 195 Bethridge Road, Toronto (ERO number 019-0305 ). Confirmatory soil sampling was conducted along the floors and walls of the final excavation, to determine the quality of soil remaining on-Site, at a frequency indicated by O. Reg. 153/04 Schedule E, Table 3, *Minimum Confirmation Sampling Requirements for Excavation*. Soil samples were analyzed by an accredited laboratory (AGAT) for PHC fractions F1 to F4.

All final confirmatory floor and wall samples obtained from the Site were determined to be within the MECP Table 1, 8 and 9 SCS for residential/parkland/institutional land use and all textured soils. As such, remediation of PHC impacts previously identified at BH1-2023 and BH4 beneath the Site is determined to be complete.

The excavation was backfilled with material from on-Site. Backfill material was analyzed by an accredited laboratory for PHCs, benzene, toluene, ethylbenzene and xylene (BTEX), VOCs, PAHs, and metals including hydride forming metals. Given that approximately 264 m<sup>3</sup> of soils were being used as backfill, EXP obtained five (5) samples and one (1) duplicate sample from the stockpiled backfill material. The results were within the Table 1, 8 and 9 SCS.

Remediation Report  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-B0  
May 9, 2025

## 8 Closure

We trust this report is satisfactory for your purposes. Should you have any questions, please do not hesitate to contact this office.

Yours truly,

EXP Services Inc.



Jaimesyn Patterson, B.Sc.H.  
Environmental Scientist  
Environmental Services



Amanda Catenaro, M.E.Sc., P.Geo., QP<sub>ESA</sub>  
Senior Project Manager  
Environmental Services

## 9 References

This study was conducted in general accordance with the applicable Regulations, Guidelines, Policies, Standards, Protocols and Objectives administered by the Ministry of the Environment. Specific reference is made to the following:

- Chapman, L.J. and D.F. Putnam, *The Physiography of Southern Ontario*, Third Edition, Ontario Ministry of Natural Resources, 1984.
- Environmental Protection Act, R.S.O. 1990, Chapter E.19, as amended, September 2004.
- Englobe Corp., Phase I Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario, dated September 30, 2021.
- EXP Services Inc., Phase One Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara on the Lake, Ontario, dated October 7, 2024.
- EXP Services Inc., Phase Two Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara on the Lake, Ontario, revised April 9, 2025.
- Google Earth, Version 6.1.0.5001 (<http://www.google.com/earth/index.html>).
- MECP (2011) Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. Ontario Ministry of the Environment, April 15, 2010.
- MECP (2011a) Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Ontario Ministry of the Environment, March 2004, amended as of July 1, 2011.
- Ministry of the Environment [MECP] (1996) Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario. Ontario Ministry of the Environment, December 1996.
- Occupational Health and Safety Act - Ministry of Labour (MOL).
- Ontario Geological Survey (2010a) Physiography of Southern Ontario (Scale 1:22,000).
- Ontario Geological Survey (2010b) Surficial geology of Southern Ontario (Scale 1:22,000).
- Ontario Geological Survey (2011) Bedrock geology of Ontario (Scale 1:22,000).
- Ontario Geological Survey, *Bedrock Geology of Ontario, Southern Sheet*, map 2544, scale 1:1,000,000, 1991.
- Ontario Ministry of Natural Resources and Forestry, *Heritage Areas Map*, ([http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR\\_NHLUPS\\_NaturalHeritage&viewer=NaturalHeritage&locale=en-US](http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US)).
- Ontario Ministry of the Environment, Conservation and Parks, Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario, December 1996.
- Ontario Ministry of the Environment, Conservation and Parks, Soil, Groundwater and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, April 15, 2011.
- Ontario Regulation 153/04 made under Part XV.1 of the *Environmental Protection Act*, July 1, 2011.
- Ontario Regulation 153/04, made under the Environmental Protection Act, May 2004, amended.
- Ontario Regulation 153/04, Record of Site Condition, Part XV.1 of the *Environmental Protection Act*, July 1, 2011.
- Ontario Water Resources Act – R.R.O. 1990, Regulation 903, amended.
- Paterson Group, Phase I-II Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara on the Lake, Ontario, dated November 17, 2023.

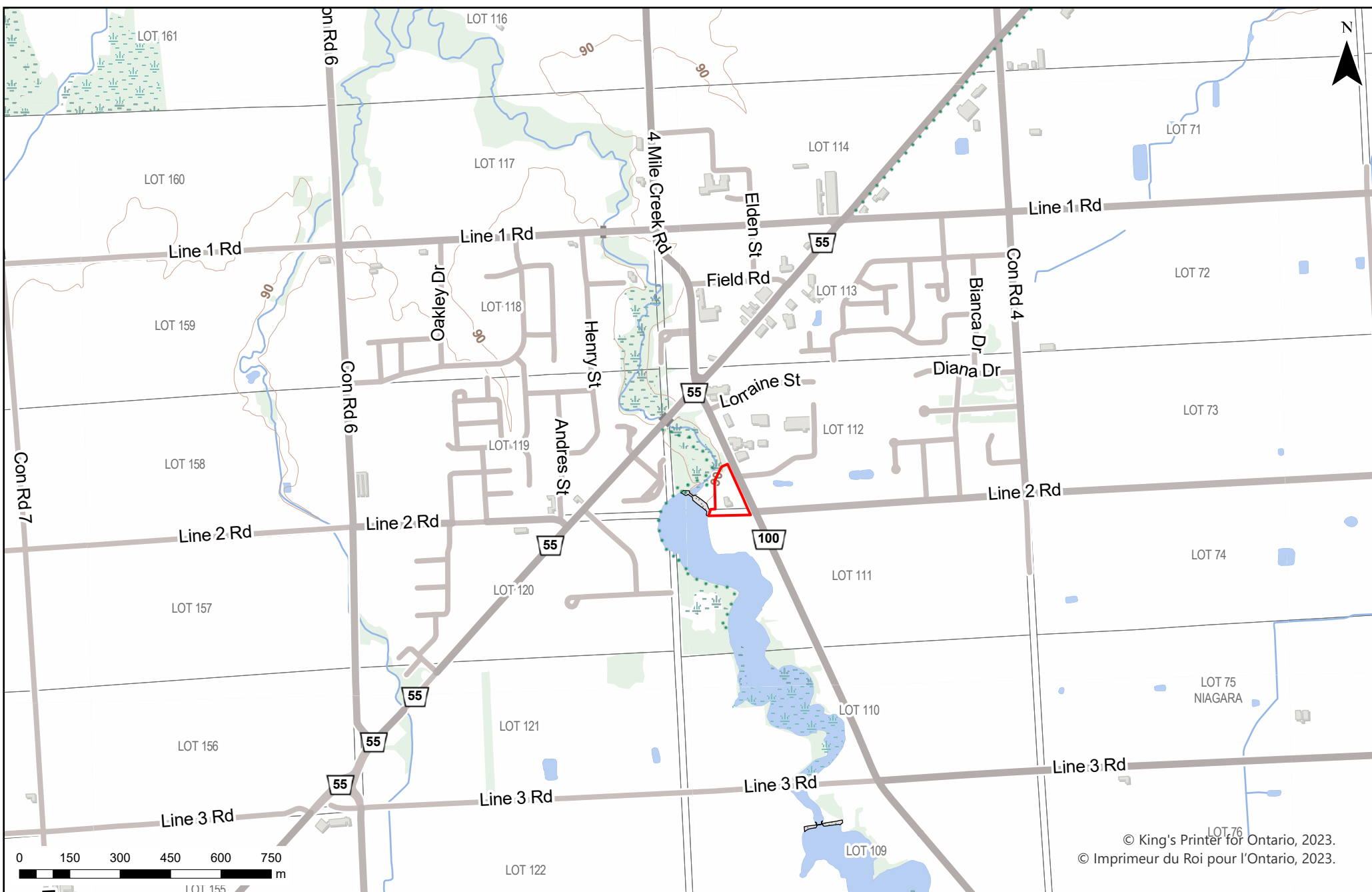
*Remediation Report*  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-2400672-B0  
May 9, 2025

- Sharpe, D.R., Quaternary Geology of Toronto and Surrounding Area, Ontario Geological Survey Preliminary Map P. 2204, Geological Series, scale 1:100,000, 1980.
- Topographic Map available at the Natural Resources Canada (NRC) website <http://atlas.nrcan.gc.ca/site/english/maps/topo/map>.

EXP Services Inc.

*Remediation Report*  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-B0  
May 9, 2025

## Figures



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 Canada  
 www.exp.com

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**LEGEND:**  
 APPROXIMATE SITE BOUNDARY

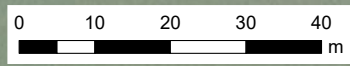
**TITLE AND LOCATION:**

**SITE LOCATION PLAN**

REMEDIATION  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	1

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**LEGEND:**

-  FORMER UNDERGROUND STORAGE TANK
-  UNDERGROUND STORAGE TANK
-  APPROXIMATE SITE BOUNDARY

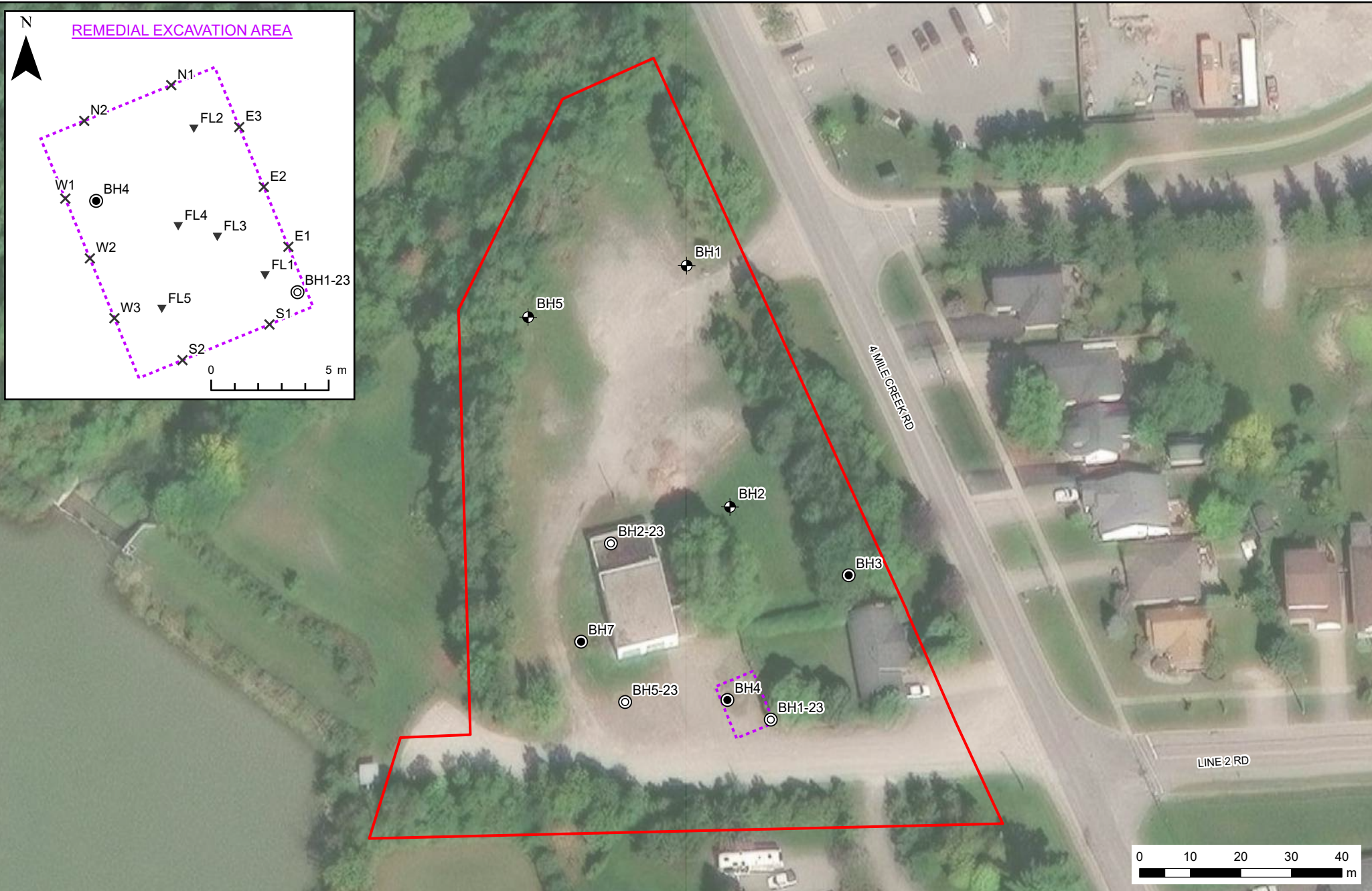
**TITLE AND LOCATION:**

**SITE PLAN**

REMEDIATION  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	2

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**LEGEND:**

	APPROXIMATE SITE BOUNDARY		CONFIRMATORY FLOOR SAMPLE
	REMEDIAL EXCAVATION AREA		CONFIRMATORY WALL SAMPLE
	BOREHOLE (EXP, 2024)		
	BOREHOLE / MONITORING WELL (EXP, 2024)		
	BOREHOLE / MONITORING WELL (PATERSON, 2023)		

**TITLE AND LOCATION:**

REMEDIAL EXCAVATION AREA AND  
 CONFIRMATORY SAMPLING LOCATION PLAN

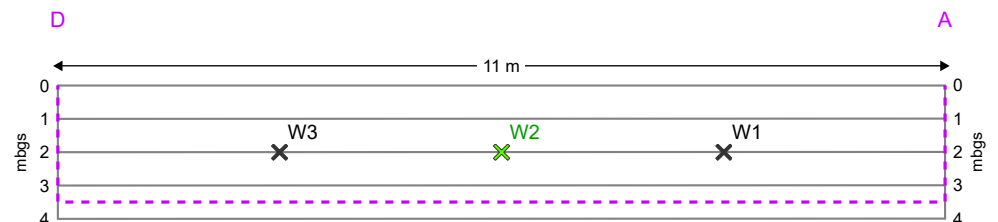
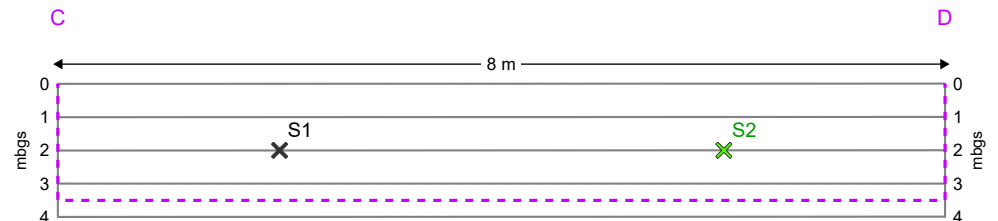
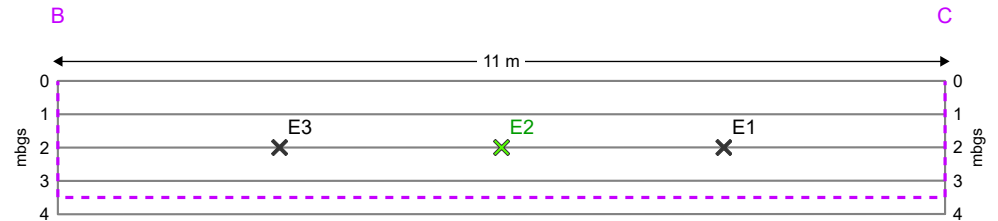
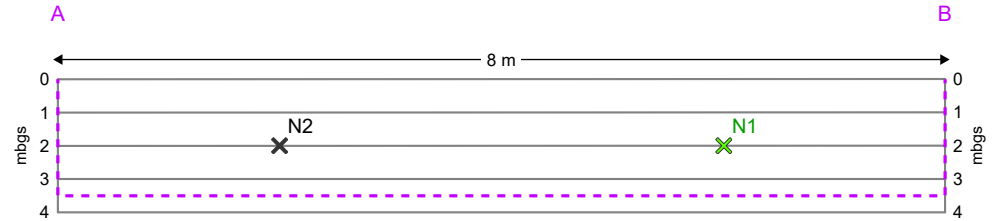
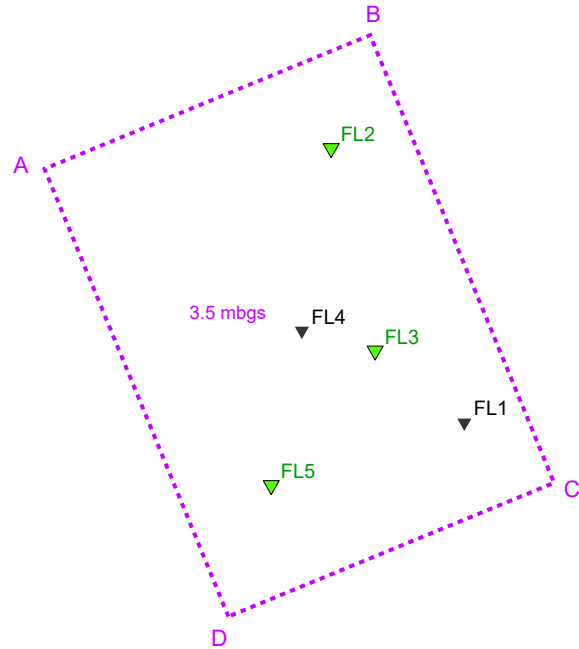
REMEDATION  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	3

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REMEDIAL EXCAVATION WALLS

REMEDIAL EXCAVATION BASE



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LEGEND:

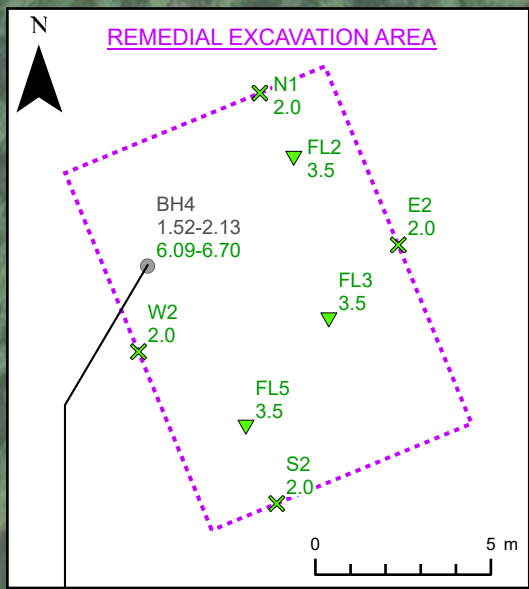
- APPROXIMATE SITE BOUNDARY
- ▼ CONFIRMATORY FLOOR SAMPLE
- × CONFIRMATORY WALL SAMPLE
- ▼ (green) CONFIRMATORY FLOOR SAMPLE MEETS TABLES 1, 8 AND 9 SCS
- × (green) CONFIRMATORY WALL SAMPLE MEETS TABLES 1, 8 AND 9 SCS

TITLE AND LOCATION:

REMEDIAL EXCAVATION-  
 PETROLEUM HYDROCARBONS (PHCs)

REMEDICATION  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO: GTR-24000672-C0	DWN: JA
SCALE: AS NOTED	CHKD: AC
DATE: MAY 2025	FIG. NO.: 4



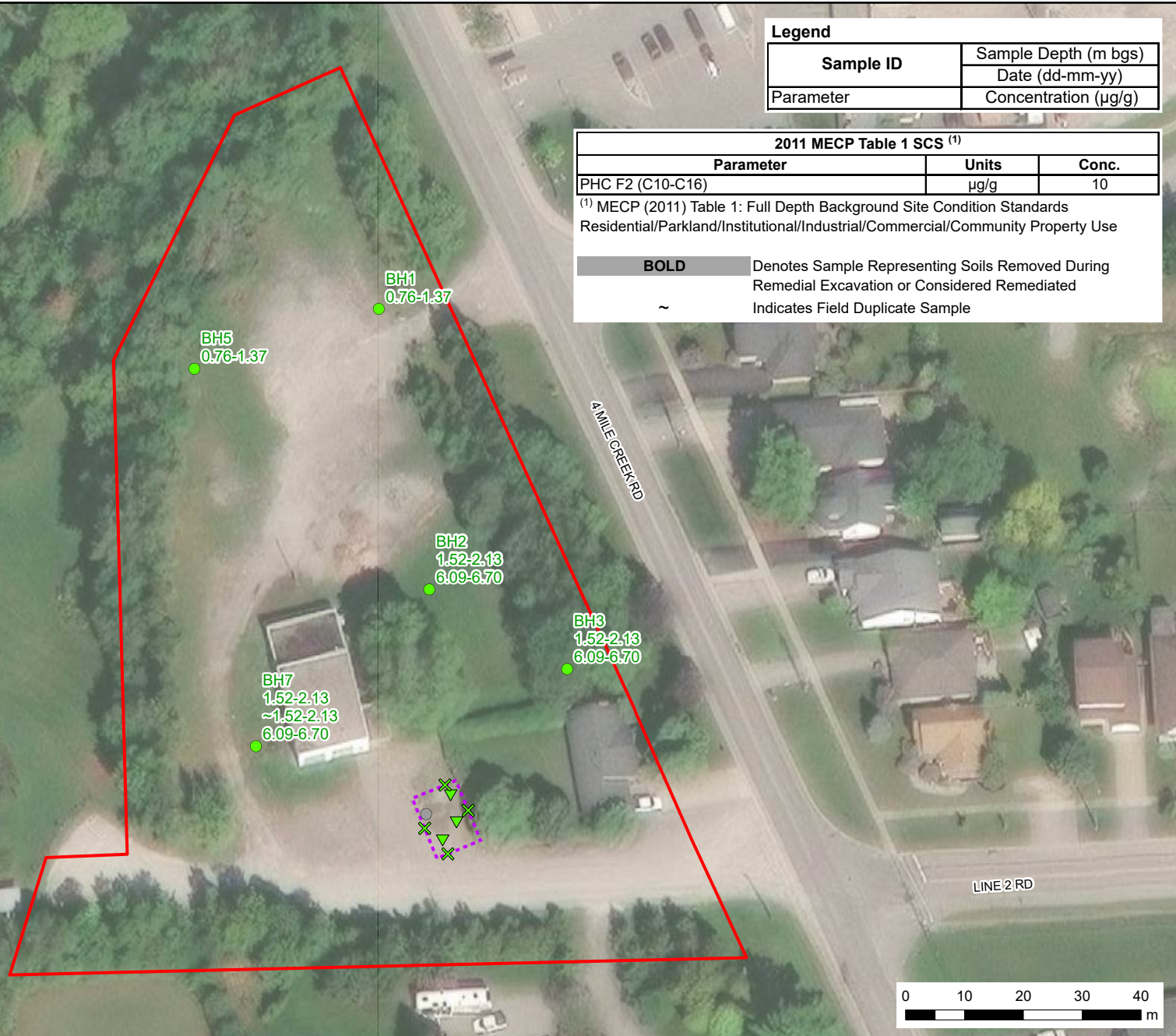
<b>BH4</b>	1.52 to 2.13	6.09 - 6.70
	24-Sep-24	24-Sep-24
PHC F2 (C10-C16)	<b>229</b>	<10

Legend	
Sample ID	Sample Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (µg/g)

2011 MECP Table 1 SCS <sup>(1)</sup>		
Parameter	Units	Conc.
PHC F2 (C10-C16)	µg/g	10

<sup>(1)</sup> MECP (2011) Table 1: Full Depth Background Site Condition Standards  
Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

**BOLD** Denotes Sample Representing Soils Removed During Remedial Excavation or Considered Remediated  
~ Indicates Field Duplicate Sample



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**LEGEND:**

- ▭ APPROXIMATE SITE BOUNDARY
- ⋯ REMEDIAL EXCAVATION AREA
- SOIL SAMPLE EXCEEDS TABLE 1 SCS FOR PHCs (REMIEDIATED)
- SOIL SAMPLE MEETS TABLE 1 SCS FOR PHCs
- ▼ CONFIRMATORY FLOOR SAMPLE MEETS TABLES 1, 8 AND 9 SCS FOR PHCs
- ✕ CONFIRMATORY WALL SAMPLE MEETS TABLES 1, 8 AND 9 SCS FOR PHCs

**TITLE AND LOCATION:**

**POST REMEDIATION  
 SOIL ANALYTICAL RESULTS -  
 PETROLEUM HYDROCARBONS (PHCs)**

REMIEDIATION  
 1544 AND 1546 FOUR MILE CREEK ROAD  
 NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO:	GTR-24000672-C0	DWN:	JA
SCALE:	AS NOTED	CHKD:	AC
DATE:	MAY 2025	FIG. NO.:	5

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*Remediation Report*  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-B0  
May 9, 2025

## Tables

**SOIL ANALYTICAL RESULTS:**

Table I - Petroleum Hydrocarbons in Soil

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

Location ID					FL2	FL3	FL5	E2		N1	S2	W2
Field Sample ID	MECP (2011) Table 8: Generic SCS for Use within 30 m of a Water Body in a Potable Groundwater Condition RPIICC Land Use (coarse and/or fine textured soil)	MECP (2011) Table 9: Generic SCS for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition RPIICC Land Use (coarse and/or fine textured soil)	MECP (2011) Table 1: Full Depth Background Site Condition Standards RPIC Land Use (coarse and/or fine textured soil)	Reporting Detection Limit (RDL)*	FL2	FL3	FL5	E2	Duplicate of E2 (E22)	N1	S2	W2
Lab ID					6698789	6698791	6698792	6698793	6698794	6698795	6698796	6698797
Sampling Date					29-Apr-25	29-Apr-25	29-Apr-25	29-Apr-25	29-Apr-25	29-Apr-25	29-Apr-25	29-Apr-25
Soil Sample Depth (mbgs)					3	3	3	2	2	2	2	2
Consultant					EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Laboratory					AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis Number	25H283181	25H283181	25H283181	25H283181	25H283181	25H283181	25H283181	25H283181	25H283181	25H283181	25H283181	
PHC F1 (C6-C10)	25	25	25	5	<5	<5	<5	<5	<5	<5	<5	<5
PHC F1 (C6-C10) - BTEX	25	25	25	5	<5	<5	<5	<5	<5	<5	<5	<5
PHC F2 (C10-C16)	10	10	10	7	<7	<7	<7	<7	<7	<7	<7	<7
PHC F3 (C16-C34)	240	240	240	50	<50	<50	<50	<50	<50	<50	<50	<50
PHC F4 (C34-C50)	120	120	120	50	<50	<50	<50	<50	<50	<50	<50	<50

All soil concentrations reported in µg/g.

\* Maximum RDL below MECP (2011) SCS

'<' = Parameter below detection limit, as indicated

'NV' = No value

NA = Not applicable or not analyzed

**Concentration exceeds MECP (2011) Table 1, 8 and 9 SCS.**

**Non-detect but detection limit exceeds the MECP (2011) SCS**



EXP Services Inc.

*Remediation Report*  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-B0  
May 9, 2025

## Appendix A: Limitation and Use of Report



## LIMITATIONS AND USE OF REPORT

### BASIS OF REPORT

The Report is based on site conditions known or inferred by the investigation undertaken as of the date of the Report. Should changes occur which potentially impact the condition of the site the recommendations of EXP may require re-evaluation. Where special concerns exist, or the Client has special considerations or requirements, these should be disclosed to EXP to allow for additional or special investigations to be undertaken not otherwise within the scope of investigation conducted for the purpose of the Report.

Where applicable, recommended field services are the minimum necessary to ascertain that construction is being carried out in general conformity with building code guidelines, generally accepted practices and EXP's recommendations. Any reduction in the level of services recommended will result in EXP providing qualified opinions regarding the adequacy of the work. EXP can assist design professionals or contractors retained by the Client to review applicable plans, drawings, and specifications as they relate to the Report or to conduct field reviews during construction.

### RELIANCE ON INFORMATION PROVIDED

The evaluation and conclusions contained in the Report are based on conditions in evidence at the time of site inspections and information provided to EXP by the Client and others. The Report has been prepared for the specific site, development, building, design or building assessment objectives and purpose as communicated by the Client. EXP has relied in good faith upon such representations, information and instructions and accepts no responsibility for any deficiency, misstatement or inaccuracy contained in the Report as a result of any misstatements, omissions, misrepresentation or fraudulent acts of persons providing information. Unless specifically stated otherwise, the applicability and reliability of the findings, recommendations, suggestions or opinions expressed in the Report are only valid to the extent that there has been no material alteration to or variation from any of the information provided to EXP.

### STANDARD OF CARE

This report ("Report") has been prepared in a manner consistent with the degree of care and skill exercised by engineering consultants currently practicing under similar circumstances and locale. No other warranty, EXPRESSED or implied, is made. Unless specifically stated otherwise, the Report does not contain environmental consulting advice.

### COMPLETE REPORT

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment form part of the Report. This material includes, but is not limited to, the terms of reference given to EXP by the Client, communications between EXP and the Client, other reports, proposals or documents prepared by EXP for the Client in connection with the site described in the Report. In order to properly understand the suggestions, recommendations and opinions expressed in the Report, reference must be made to the Report in its entirety. EXP is not responsible for use by any party of portions of the Report.



### USE OF REPORT

The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client. No other party may use or rely upon the Report in whole or in part without the written consent of EXP. Any use of the Report, or any portion of the Report, by a third party are the sole responsibility of such third party. EXP is not responsible for damages suffered by any third party resulting from unauthorised use of the Report.

### REPORT FORMAT

Where EXP has submitted both electronic file and a hard copy of the Report, or any document forming part of the Report, only the signed and sealed hard copy shall be the original documents for record and working purposes. In the event of a dispute or discrepancy, the hard copy shall govern. Electronic files transmitted by EXP utilize specific software and hardware systems. EXP makes no representation about the compatibility of these files with the Client's current or future software and hardware systems. Regardless of format, the documents described herein are EXP's instruments of professional service and shall not be altered without the written consent of EXP.

EXP Services Inc.

*Remediation Report*  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-2400672-B0  
May 9, 2025

## Appendix B: Certificates of Analysis

**CLIENT NAME: EXP SERVICES INC**  
**1266 SOUTH SERVICE ROAD, SUITE C1-1**  
**STONEY CREEK , ON L8E 5R9**  
**(905) 573-4000**

**ATTENTION TO: Amanda Catenaro**  
**PROJECT: GTR-24000672-BO-1**  
**AGAT WORK ORDER: 25H283181**

**TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist**  
**DATE REPORTED: May 05, 2025**  
**PAGES (INCLUDING COVER): 5**  
**VERSION\*: 2**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

**\*Notes**

VERSION 2:Version 2 supersedes work order 25H283181 , Version 1, issued May 5, 2025. Complete.

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

# Certificate of Analysis

AGAT WORK ORDER: 25H283181

PROJECT: GTR-24000672-BO-1

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE: Four Mile Creek Rd, N.O.T.L.

ATTENTION TO: Amanda Catenaro

SAMPLED BY: SG/JP

## O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2025-04-29

DATE REPORTED: 2025-05-05

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:	FL2	FL3	FL5	E2	E22	N1	S2	W2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2025-04-29	2025-04-29	2025-04-29	2025-04-29	2025-04-29	2025-04-29	2025-04-29	2025-04-29	2025-04-29
				08:30	08:45	09:00	09:15	09:30	09:30	09:45	10:00	10:15
				6698789	6698791	6698792	6698793	6698794	6698795	6698796	6698797	6698797
F1 (C6 to C10)	µg/g		5	<5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	7	<7	<7	<7	<7	<7	<7	<7	<7	<7
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	14.7	13.1	13.3	9.5	9.9	17.8	14.8	12.9	
<b>Surrogate</b>	<b>Unit</b>	<b>Acceptable Limits</b>										
Toluene-d8	% Recovery	60-140		86.0	79.2	80.8	75.8	77.0	80.8	80.8	72.2	
Terphenyl	%	60-140		108	96	94	96	118	105	109	89	

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 406/19 TABLE 1: Full Depth Background Site Condition - RPIC  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6698789-6698797** Results are based on sample dry weight.  
The C6-C10 fraction is calculated using Toluene response factor.  
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.  
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25H283181

PROJECT: GTR-24000672-BO-1

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mile Creek Rd, N.O.T.L.

SAMPLED BY: SG/JP

### Trace Organics Analysis

RPT Date: May 05, 2025

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - PHCs F1 - F4 (Soil)**

F1 (C6 to C10)	6705121		<5	<5	NA	< 5	102%	60%	140%	83%	60%	140%	99%	60%	140%
F2 (C10 to C16)	6705605		< 10	< 10	NA	< 7	103%	60%	140%	122%	60%	140%	123%	60%	140%
F3 (C16 to C34)	6705605		< 50	< 50	NA	< 50	103%	60%	140%	126%	60%	140%	120%	60%	140%
F4 (C34 to C50)	6705605		< 50	< 50	NA	< 50	83%	60%	140%	102%	60%	140%	96%	60%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

**O. Reg. 153(511) - PHCs F1 - F4 (Soil)**

F1 (C6 to C10)	6698797	6698797	<5	<5	NA	< 5	110%	60%	140%	99%	60%	140%	88%	60%	140%
----------------	---------	---------	----	----	----	-----	------	-----	------	-----	-----	------	-----	-----	------

**Certified By:**



## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25H283181

PROJECT: GTR-24000672-BO-1

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mile Creek Rd, N.O.T.L.

SAMPLED BY: SG/JP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Trace Organics Analysis</b>			
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

Have feedback?  
Scan here for a quick survey!



5835 Coopers Avenue  
Mississauga, Ontario L4Z 1Y2  
905.712.5100 Fax: 905.712.5122  
webearth.agatlabs.com

### Laboratory Use Only

Work Order #: 25PR83181  
Cooler Quantity: LG COOLBOX  
Arrival Temperatures: 7-17-0 7-5  
Depot Temperatures: 8-6 18.9 19.2  
Custody Seal Intact:  Yes  No  N/A  
Notes: LOOSE ICE

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody for potable water consumed by humans

### Report Information:

Company: EXP Services Inc  
Contact: Amanda Catenaro / Accounts Payable  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: amanda.catenaro@exp.com  
2. Email: scott.grant-hose@exp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Regulation 406  Sewer Use  
 Sanitary  Storm

Table Indicate One  
 Ind/Com  Res/Park  Agriculture

Table Indicate One  
 Ind/Com  Res/Park  Agriculture

Soil Texture (Check One)  
 Coarse  Fine

Regulation 558  CCME

Region \_\_\_\_\_  
 Prov. Water Quality Objectives (PWQO)  
 Other \_\_\_\_\_

Indicate One

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days  
Rush TAT (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

### Project Information:

Project: GTR-24000672-Bo-1  
Site Location: Four Mile Creek Rd, N.O.T.L.  
Sampled By: SG/JP  
AGAT Quote #: \_\_\_\_\_ PO: GTR-24000672-Bo-1

### Is this submission for a Record of Site Condition (RSC)?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

### Invoice Information:

Bill To Same: Yes  No   
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: AP@exp.com

### Legal Sample

### Sample Matrix Legend

GW Ground Water SD Sediment  
O Oil SW Surface Water  
P Paint R Rock/Shale  
S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N	Metals & Inorganics	Metals: <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB	F1-F4 PHOS	VOC	PAHs	PCBs: Aroclors <input type="checkbox"/>	Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SLP Rainwater Leach mSP, P: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs <input type="checkbox"/> OC	Landfill Disposal Characterization TCLP: TCLP: <input type="checkbox"/> MB1 <input type="checkbox"/> VOCs <input type="checkbox"/> ABNS <input type="checkbox"/> B1e1P <input type="checkbox"/> PCBs	Corrosivity: <input type="checkbox"/> Moisture <input type="checkbox"/> Sulphide	Potentially Hazardous or High Concentration (Y/N)	
1. FL2	2025/04/29	830 AM	2	S					/										
2. FL3		845 AM							/										
3. FL5		900 AM							/										
4. E2		915 AM							/										
5. E22		930 AM							/										
6. N1		945 AM							/										
7. S2		1000 AM							/										
8. W2		1015 AM							/										
9.		AM																	
10.		PM																	
11.		PM																	

Samples Relinquished By (Print Name and Sign): <u>Scott Hose</u> <u>SG/H</u>	Date: <u>2025/04/29</u>	Time: <u>1:33</u>	Samples Received By (Print Name and Sign): <u>DTAC</u> <u>EBM</u>	Date: <u>04/29/25</u>	Time: <u>1:45 PM</u>
Samples Relinquished By (Print Name and Sign): <u>DTAC</u> <u>EBM</u>	Date: <u>04/29/25</u>	Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>DTAC</u> <u>EBM</u>	Date: <u>Apr 29</u>	Time: <u>9:40Z</u>
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

Page 1 of 1  
No: T-168898

EXP Services Inc.

*Remediation Report*  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-B0  
May 9, 2025

## Appendix C: Survey Plan



ASSOCIATION OF ONTARIO  
LAND SURVEYORS  
PLAN SUBMISSION FORM  
V-67863

THIS PLAN IS NOT VALID  
UNLESS IT IS AN EMBOSSED  
ORIGINAL COPY  
ISSUED BY THE SURVEYOR  
In accordance with  
Regulation 1505, Section 29(3)

PLAN OF SURVEY  
(WITH TOPOGRAPHIC DETAIL) OF  
**PART OF TOWNSHIP LOT 112  
& PART OF ROAD ALLOWANCE  
BETWEEN TOWNSHIP LOTS 111 & 112**  
(GEOGRAPHIC TOWNSHIP OF NIAGARA)  
IN THE  
**TOWNSHIP OF NIAGARA-ON-THE-LAKE**  
REGIONAL MUNICIPALITY OF NIAGARA  
SCALE & NOTES  
Scale 1:300

METRIC  
DISTANCES, ELEVATIONS AND CO-ORDINATES SHOWN ON THIS PLAN ARE IN METRES  
AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

ELEVATION NOTE  
ELEVATIONS ARE GEODETIC ORIGIN (CGVD-1928-78), AND ARE DERIVED FROM  
REAL TIME NETWORK (RTN) OBSERVATIONS AND NATURAL RESOURCES  
CANADA'S GEOD MODEL HT2.0

**BEARING NOTE**  
BEARINGS ARE UTM GRID, DERIVED FROM GPS OBSERVED REFERENCE POINTS  
A AND B, BY REAL TIME NETWORK (RTN) OBSERVATIONS, UTM ZONE 17 (81°  
00' WEST LONGITUDE) NAD83 (CSRS) (2011.0).

**HORIZONTAL DATUM NOTE**  
PROJECTION: UNIVERSAL TRANSVERSE MERCATOR  
(UTM, ZONE 17, CM 8100'W)

**DATUM:** NAD83 (CSRS) (2011.0)

**GRID SCALE CONVERSION**  
DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID DISTANCES BY  
MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999872.

OBSERVED REFERENCE POINTS (ORPs) DERIVED FROM GPS OBSERVATIONS USING REAL TIME NETWORK (RTN) OBSERVATIONS UTM COORDINATES TO URBAN ACCURACY PER SEC 14(2) OF O. REG. 215/10		
MONUMENT ID	NORTHING	EASTING
(A) IB	4786944.165	652484.398
(B) IB	4786733.649	652522.005

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS  
OR BOUNDARIES SHOWN ON THIS PLAN.

- LEGEND**
- DENOTES SURVEY MONUMENT FOUND
  - DENOTES SURVEY MONUMENT PLANTED
  - IB DENOTES IRON BAR
  - SIB DENOTES STANDARD IRON BAR
  - SSIB DENOTES SHORT STANDARD IRON BAR
  - OU DENOTES ORIGIN UNKNOWN
  - S39 DENOTES D. G. URE, O.L.S.
  - S67 DENOTES R. B. ERWIN, O.L.S.
  - 744 DENOTES R. J. MATTHEWS, O.L.S.
  - 1487 DENOTES J. P. NOUWENS, O.L.S.
  - JOB DENOTES J. D. BARNES, O.L.S.
  - P1 DENOTES PLAN BY J. D. BARNES LTD.  
DATED JULY 19, 2022  
SPECIAL PLAN 85
  - P2 DENOTES WAINWALE
  - MH DENOTES CATCHBASIN
  - CB DENOTES LIGHT STANDARD
  - LS DENOTES TOP OF CURB ELEVATION
  - TC DENOTES GUTTER ELEVATION
  - QUT DENOTES OVERHEAD UTILITY CABLES
  - OH DENOTES DECIDUOUS TREE
  - DT DENOTES CONIFEROUS TREE
  - CT DENOTES UTILITY POLE
  - FF DENOTES FINISHED FLOOR ELEVATION
  - S39 DENOTES GARAGE FLOOR ELEVATION
  - QUT DENOTES CHAIN LINK FENCE
  - CLF DENOTES POST & WIRE FENCE
  - PWF DENOTES REMAINS OF POST & WIRE FENCE
  - GL DENOTES GASLINE
  - BRK DENOTES BRICK
  - DNFH DENOTES TOP NUT OF FIRE HYDRANT
  - CRW DENOTES CONCRETE RETAINING WALL

**REVISED NOTE**  
REVISED TO SHOW REMOVED BERM & CURBS ON EAST SIDE OF FOUR MILE CREEK ROAD  
& NEW DRUPLINE AS MARKED OUT

FEBRUARY 19, 2025

ERIC G. SALZER  
O.L.S., O.L.I.P.

**SURVEYOR'S CERTIFICATE**  
I CERTIFY THAT  
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS  
ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.  
2. THE SURVEY WAS COMPLETED ON JANUARY 25, 2024.

JANUARY 26, 2024

ERIC G. SALZER  
O.L.S., O.L.I.P.

**Barich Grenkie  
Surveying Ltd.**  
301 HWY No. 8 (2ND FLOOR) STONEY CREEK, ON  
L8G 1E8 (416) 662-6767

DWN BY: EGS  
CHK BY: EWA  
JOB NO. 23-3200

A DIVISION OF GEOMAPLE

THIS PLAN WAS PREPARED FOR REZEN HOLDING CORPORATION AND THE  
UNDERSIGNED ASSUMES NO RESPONSIBILITY FOR USE BY OTHER PARTIES.

EXP Services Inc.

*Remediation Report*  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-2400672-B0  
May 9, 2025

## Appendix D: Soil Disposal Records



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

TICKET#	DATE	SCALE OPERATOR
BT 34810	04/29/2025	KIMBERLEY
TIME IN	TIME OUT	CONTRACT
10:02 am	10:02 am	BT-1544 Four Mile Creek
REFERENCE		
SUPER-B 281		

<b>GROSS WEIGHT</b>	41,450 kg	Scale In
<b>TARE WEIGHT</b>	14,100 kg	Scale Out
<b>NET WEIGHT</b>	27,350 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
27.35	mt	Excess Soil				

By signing this ticket, I accept all weights, classifications and charges contained herein, and certify this material to be 100% non-hazardous solid waste and expressly agree not to dump liquid or "hazardous waste" material as defined in Ontario Regulation 347. YORK1 does not assume any responsibility for any injury to persons or damage to vehicles.

As the soil generator I hereby certify, the amount excavated from the source residential property does not exceed 1,000 cubic metres; does not have any known contamination, the property has not been used to store equipment or material [fuels, pesticides, solvents, batteries, etc.] that may have caused contamination and has not come from, or adjacent to, a remediation project, commercial or industrial property. YORK1 reserves the right to refuse and reload material that does not meet the above criteria. Please contact the office for further information.

TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

TICKET#	DATE	SCALE OPERATOR
BT 34811	04/29/2025	KIMBERLEY
TIME IN	TIME OUT	CONTRACT
10:04 am	10:04 am	BT-1544 Four Mile Creek
REFERENCE		
GR 121		

<b>GROSS WEIGHT</b>	38,140 kg	Scale In
<b>TARE WEIGHT</b>	13,900 kg	Scale Out
<b>NET WEIGHT</b>	24,240 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
24.24	mt	Excess Soil				

By signing this ticket, I accept all weights, classifications and charges contained herein, and certify this material to be 100% non-hazardous solid waste and expressly agree not to dump liquid or "hazardous waste" material as defined in Ontario Regulation 347. YORK1 does not assume any responsibility for any injury to persons or damage to vehicles.

As the soil generator I hereby certify, the amount excavated from the source residential property does not exceed 1,000 cubic metres; does not have any known contamination, the property has not been used to store equipment or material [fuels, pesticides, solvents, batteries, etc.] that may have caused contamination and has not come from, or adjacent to, a remediation project, commercial or industrial property. YORK1 reserves the right to refuse and reload material that does not meet the above criteria. Please contact the office for further information.

TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

<b>TICKET#</b>	<b>DATE</b>	<b>SCALE OPERATOR</b>
BT 34815	04/29/2025	KIMBERLEY
<b>TIME IN</b>	<b>TIME OUT</b>	<b>CONTRACT</b>
10:10 am	10:10 am	BT-1544 Four Mile Creek
<b>REFERENCE</b>		
9625518 CANADA INC #416		

<b>GROSS WEIGHT</b>	38,820 kg	Scale In
<b>TARE WEIGHT</b>	14,600 kg	Scale Out
<b>NET WEIGHT</b>	24,220 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
24.22	mt	Excess Soil				

By signing this ticket, I accept all weights, classifications and charges contained herein, and certify this material to be 100% non-hazardous solid waste and expressly agree not to dump liquid or "hazardous waste" material as defined in Ontario Regulation 347. YORK1 does not assume any responsibility for any injury to persons or damage to vehicles.

As the soil generator I hereby certify, the amount excavated from the source residential property does not exceed 1,000 cubic metres; does not have any known contamination, the property has not been used to store equipment or material [fuels, pesticides, solvents, batteries, etc.] that may have caused contamination and has not come from, or adjacent to, a remediation project, commercial or industrial property. YORK1 reserves the right to refuse and reload material that does not meet the above criteria. Please contact the office for further information.

TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

<b>TICKET#</b>	<b>DATE</b>	<b>SCALE OPERATOR</b>
BT 34816	04/29/2025	KIMBERLEY
<b>TIME IN</b>	<b>TIME OUT</b>	<b>CONTRACT</b>
10:11 am	10:11 am	BT-1544 Four Mile Creek
<b>REFERENCE</b>		
JAGDEV 78		

<b>GROSS WEIGHT</b>	34,710 kg	Scale In
<b>TARE WEIGHT</b>	13,800 kg	Scale Out
<b>NET WEIGHT</b>	20,910 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
20.91	mt	Excess Soil				

By signing this ticket, I accept all weights, classifications and charges contained herein, and certify this material to be 100% non-hazardous solid waste and expressly agree not to dump liquid or "hazardous waste" material as defined in Ontario Regulation 347. YORK1 does not assume any responsibility for any injury to persons or damage to vehicles.

As the soil generator I hereby certify, the amount excavated from the source residential property does not exceed 1,000 cubic metres; does not have any known contamination, the property has not been used to store equipment or material [fuels, pesticides, solvents, batteries, etc.] that may have caused contamination and has not come from, or adjacent to, a remediation project, commercial or industrial property. YORK1 reserves the right to refuse and reload material that does not meet the above criteria. Please contact the office for further information.

TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

TICKET#	DATE	SCALE OPERATOR
BT 34820	04/29/2025	KIMBERLEY
TIME IN	TIME OUT	CONTRACT
10:20 am	10:20 am	BT-1544 Four Mile Creek
REFERENCE		
MAHAL 92		

<b>GROSS WEIGHT</b>	38,960 kg	Scale In
<b>TARE WEIGHT</b>	14,300 kg	Scale Out
<b>NET WEIGHT</b>	24,660 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
24.66	mt	Excess Soil				

By signing this ticket, I accept all weights, classifications and charges contained herein, and certify this material to be 100% non-hazardous solid waste and expressly agree not to dump liquid or "hazardous waste" material as defined in Ontario Regulation 347. YORK1 does not assume any responsibility for any injury to persons or damage to vehicles.

As the soil generator I hereby certify, the amount excavated from the source residential property does not exceed 1,000 cubic metres; does not have any known contamination, the property has not been used to store equipment or material [fuels, pesticides, solvents, batteries, etc.] that may have caused contamination and has not come from, or adjacent to, a remediation project, commercial or industrial property. YORK1 reserves the right to refuse and reload material that does not meet the above criteria. Please contact the office for further information.

TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

TICKET#	DATE	SCALE OPERATOR
BT 34824	04/29/2025	KIMBERLEY
TIME IN	TIME OUT	CONTRACT
10:27 am	10:27 am	BT-1544 Four Mile Creek
REFERENCE		
BRAICH #991		

<b>GROSS WEIGHT</b>	33,330 kg	Scale In
<b>TARE WEIGHT</b>	14,000 kg	Scale Out
<b>NET WEIGHT</b>	19,330 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
19.33	mt	Excess Soil				

By signing this ticket, I accept all weights, classifications and charges contained herein, and certify this material to be 100% non-hazardous solid waste and expressly agree not to dump liquid or "hazardous waste" material as defined in Ontario Regulation 347. YORK1 does not assume any responsibility for any injury to persons or damage to vehicles.

As the soil generator I hereby certify, the amount excavated from the source residential property does not exceed 1,000 cubic metres; does not have any known contamination, the property has not been used to store equipment or material [fuels, pesticides, solvents, batteries, etc.] that may have caused contamination and has not come from, or adjacent to, a remediation project, commercial or industrial property. YORK1 reserves the right to refuse and reload material that does not meet the above criteria. Please contact the office for further information.

TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

<b>TICKET#</b>	<b>DATE</b>	<b>SCALE OPERATOR</b>
BT 34828	04/29/2025	KIMBERLEY
<b>TIME IN</b>	<b>TIME OUT</b>	<b>CONTRACT</b>
10:34 am	10:34 am	BT-1544 Four Mile Creek
<b>REFERENCE</b>		
STI 19		

<b>GROSS WEIGHT</b>	32,130 kg	Scale In
<b>TARE WEIGHT</b>	14,100 kg	Scale Out
<b>NET WEIGHT</b>	18,030 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
18.03	mt	Excess Soil				

By signing this ticket, I accept all weights, classifications and charges contained herein, and certify this material to be 100% non-hazardous solid waste and expressly agree not to dump liquid or "hazardous waste" material as defined in Ontario Regulation 347. YORK1 does not assume any responsibility for any injury to persons or damage to vehicles.

As the soil generator I hereby certify, the amount excavated from the source residential property does not exceed 1,000 cubic metres; does not have any known contamination, the property has not been used to store equipment or material [fuels, pesticides, solvents, batteries, etc.] that may have caused contamination and has not come from, or adjacent to, a remediation project, commercial or industrial property. YORK1 reserves the right to refuse and reload material that does not meet the above criteria. Please contact the office for further information.

TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

<b>TICKET#</b>	<b>DATE</b>	<b>SCALE OPERATOR</b>
BT 34836	04/29/2025	KIMBERLEY
<b>TIME IN</b>	<b>TIME OUT</b>	<b>CONTRACT</b>
10:54 am	10:54 am	BT-1544 Four Mile Creek
<b>REFERENCE</b>		
KARTAR 10		

<b>GROSS WEIGHT</b>	38,320 kg	Scale In
<b>TARE WEIGHT</b>	14,500 kg	Scale Out
<b>NET WEIGHT</b>	23,820 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
23.82	mt	Excess Soil				

By signing this ticket, I accept all weights, classifications and charges contained herein, and certify this material to be 100% non-hazardous solid waste and expressly agree not to dump liquid or "hazardous waste" material as defined in Ontario Regulation 347. YORK1 does not assume any responsibility for any injury to persons or damage to vehicles.

As the soil generator I hereby certify, the amount excavated from the source residential property does not exceed 1,000 cubic metres; does not have any known contamination, the property has not been used to store equipment or material [fuels, pesticides, solvents, batteries, etc.] that may have caused contamination and has not come from, or adjacent to, a remediation project, commercial or industrial property. YORK1 reserves the right to refuse and reload material that does not meet the above criteria. Please contact the office for further information.

TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

TICKET#	DATE	SCALE OPERATOR
BT 34839	04/29/2025	KIMBERLEY
TIME IN	TIME OUT	CONTRACT
10:58 am	10:58 am	BT-1544 Four Mile Creek
REFERENCE		
JOHAL 49		

<b>GROSS WEIGHT</b>	38,030 kg	Scale In
<b>TARE WEIGHT</b>	14,200 kg	Scale Out
<b>NET WEIGHT</b>	23,830 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
23.83	mt	Excess Soil				

By signing this ticket, I accept all weights, classifications and charges contained herein, and certify this material to be 100% non-hazardous solid waste and expressly agree not to dump liquid or "hazardous waste" material as defined in Ontario Regulation 347. YORK1 does not assume any responsibility for any injury to persons or damage to vehicles.

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TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

TICKET#	DATE	SCALE OPERATOR
BT 34843	04/29/2025	KIMBERLEY
TIME IN	TIME OUT	CONTRACT
11:01 am	11:01 am	BT-1544 Four Mile Creek
REFERENCE		
VIRDI J12		

<b>GROSS WEIGHT</b>	37,050 kg	Scale In
<b>TARE WEIGHT</b>	14,000 kg	Scale Out
<b>NET WEIGHT</b>	23,050 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
23.05	mt	Excess Soil				

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TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

TICKET#	DATE	SCALE OPERATOR
BT 34848	04/29/2025	KIMBERLEY
TIME IN	TIME OUT	CONTRACT
11:09 am	11:09 am	BT-1544 Four Mile Creek
REFERENCE		
AG #77		

<b>GROSS WEIGHT</b>	37,390 kg	Scale In
<b>TARE WEIGHT</b>	14,500 kg	Scale Out
<b>NET WEIGHT</b>	22,890 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
22.89	mt	Excess Soil				

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TOTAL
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<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

TICKET#	DATE	SCALE OPERATOR
BT 34852	04/29/2025	KIMBERLEY
TIME IN	TIME OUT	CONTRACT
11:13 am	11:13 am	BT-1544 Four Mile Creek
REFERENCE		
2294704 ONTARIO INC 75		

<b>GROSS WEIGHT</b>	39,740 kg	Scale In
<b>TARE WEIGHT</b>	13,900 kg	Scale Out
<b>NET WEIGHT</b>	25,840 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
25.84	mt	Excess Soil				

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TOTAL
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<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

TICKET#	DATE	SCALE OPERATOR
BT 34859	04/29/2025	KIMBERLEY
TIME IN	TIME OUT	CONTRACT
11:23 am	11:23 am	BT-1544 Four Mile Creek
REFERENCE		
REI 25		

<b>GROSS WEIGHT</b>	38,820 kg	Scale In
<b>TARE WEIGHT</b>	14,200 kg	Scale Out
<b>NET WEIGHT</b>	24,620 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
24.62	mt	Excess Soil				

By signing this ticket, I accept all weights, classifications and charges contained herein, and certify this material to be 100% non-hazardous solid waste and expressly agree not to dump liquid or "hazardous waste" material as defined in Ontario Regulation 347. YORK1 does not assume any responsibility for any injury to persons or damage to vehicles.

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TOTAL
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<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

TICKET#	DATE	SCALE OPERATOR
BT 34860	04/29/2025	KIMBERLEY
TIME IN	TIME OUT	CONTRACT
11:24 am	11:24 am	BT-1544 Four Mile Creek
REFERENCE		
PABLA HAULAGE 77		

<b>GROSS WEIGHT</b>	38,440 kg	Scale In
<b>TARE WEIGHT</b>	14,100 kg	Scale Out
<b>NET WEIGHT</b>	24,340 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
24.34	mt	Excess Soil				

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TOTAL
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<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

<b>TICKET#</b>	<b>DATE</b>	<b>SCALE OPERATOR</b>
BT 34862	04/29/2025	KIMBERLEY
<b>TIME IN</b>	<b>TIME OUT</b>	<b>CONTRACT</b>
11:27 am	11:27 am	BT-1544 Four Mile Creek
<b>REFERENCE</b>		
ASEES #27		

<b>GROSS WEIGHT</b>	38,860 kg	Scale In
<b>TARE WEIGHT</b>	14,000 kg	Scale Out
<b>NET WEIGHT</b>	24,860 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
24.86	mt	Excess Soil				

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TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

<b>TICKET#</b>	<b>DATE</b>	<b>SCALE OPERATOR</b>
BT 34863	04/29/2025	KIMBERLEY
<b>TIME IN</b>	<b>TIME OUT</b>	<b>CONTRACT</b>
11:28 am	11:28 am	BT-1544 Four Mile Creek
<b>REFERENCE</b>		
DEEP TRANSPORT 15		

<b>GROSS WEIGHT</b>	37,480 kg	Scale In
<b>TARE WEIGHT</b>	13,500 kg	Scale Out
<b>NET WEIGHT</b>	23,980 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
23.98	mt	Excess Soil				

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<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

<b>TICKET#</b>	<b>DATE</b>	<b>SCALE OPERATOR</b>
BT 34896	04/29/2025	KIMBERLEY
<b>TIME IN</b>	<b>TIME OUT</b>	<b>CONTRACT</b>
12:11 pm	12:11 pm	BT-1544 Four Mile Creek
<b>REFERENCE</b>		
GRAND RIVER 405		

<b>GROSS WEIGHT</b>	33,950 kg	Scale In
<b>TARE WEIGHT</b>	14,500 kg	Scale Out
<b>NET WEIGHT</b>	19,450 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
19.45	mt	Excess Soil				

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TOTAL
PAID
<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

<b>TICKET#</b>	<b>DATE</b>	<b>SCALE OPERATOR</b>
BT 34973	04/29/2025	KIMBERLEY
<b>TIME IN</b>	<b>TIME OUT</b>	<b>CONTRACT</b>
2:10 pm	2:10 pm	BT-1544 Four Mile Creek
<b>REFERENCE</b>		
SUPER-B 281		

<b>GROSS WEIGHT</b>	36,860 kg	Scale In
<b>TARE WEIGHT</b>	14,100 kg	Scale Out
<b>NET WEIGHT</b>	22,760 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
22.76	mt	Excess Soil				

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TOTAL
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<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**



195 Bethridge Road  
 Toronto, ON  
 M9W 1N4  
 (416) 688-4747

<b>TICKET#</b>	<b>DATE</b>	<b>SCALE OPERATOR</b>
BT 34979	04/29/2025	KIMBERLEY
<b>TIME IN</b>	<b>TIME OUT</b>	<b>CONTRACT</b>
2:20 pm	2:20 pm	BT-1544 Four Mile Creek
<b>REFERENCE</b>		
GR 121		

<b>GROSS WEIGHT</b>	35,230 kg	<i>Scale In</i>
<b>TARE WEIGHT</b>	13,900 kg	<i>Scale Out</i>
<b>NET WEIGHT</b>	21,330 kg	

Account No.001538

Michael Bros. Excavating-ES  
 407 Basaltic Rd., Concord, ON L4K 4W8

QTY.	UNIT	DESCRIPTION	RATE	SUBTOTAL	HST	TOTAL
21.33	mt	Excess Soil				

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<b>CHANGE DUE</b>
AUTH/CHEQUE #

SIGNATURE \_\_\_\_\_

**HST# 826843096**

EXP Services Inc.

*Remediation Report*  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-2400672-B0  
May 9, 2025

## Appendix E: Backfill Material Analytical Results

**CLIENT NAME: EXP SERVICES INC**  
**1266 SOUTH SERVICE ROAD, SUITE C1-1**  
**STONEY CREEK , ON L8E 5R9**  
**(905) 573-4000**

**ATTENTION TO: Amanda Catenaro**  
**PROJECT: GTR-24000672-B0-1**

**AGAT WORK ORDER: 25H282719**

**SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Lab Operation Manager**  
**TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor**

**DATE REPORTED: Apr 30, 2025**

**PAGES (INCLUDING COVER): 15**

**VERSION\*: 1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

**\*Notes**

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

# Certificate of Analysis

AGAT WORK ORDER: 25H282719

PROJECT: GTR-24000672-B0-1

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.

SAMPLED BY: SG

## O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2025-04-28

DATE REPORTED: 2025-04-30

Parameter	Unit	SAMPLE DESCRIPTION:		SP-2	SP-22	SP-5	SP-7	SP-9	SP-11
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2025-04-28 09:05	2025-04-28 09:10	2025-04-28 09:25	2025-04-28 09:35	2025-04-28 09:45	2025-04-28 09:55
		G / S	RDL	6694809	6694810	6694813	6694815	6694817	6694819
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	6	6	6	6	5	6
Barium	µg/g	220	2.0	118	119	153	126	90.0	106
Beryllium	µg/g	2.5	0.5	0.7	0.7	0.9	0.7	0.6	0.6
Boron	µg/g	36	5	8	9	7	8	8	8
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	22	23	27	22	21	23
Cobalt	µg/g	21	0.8	11.4	11.4	11.8	11.0	10.5	11.7
Copper	µg/g	92	1.0	33.1	32.8	32.0	33.4	28.6	34.0
Lead	µg/g	120	1	7	6	8	8	10	10
Molybdenum	µg/g	2	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	82	1	23	25	29	23	23	24
Selenium	µg/g	1.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	0.69	0.68	0.90	0.65	0.59	0.63
Vanadium	µg/g	86	2.0	34.1	34.5	44.8	35.2	31.7	34.1
Zinc	µg/g	290	5	50	51	53	54	58	62

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**

*Amanjit Bhela*  


# Certificate of Analysis

AGAT WORK ORDER: 25H282719

PROJECT: GTR-24000672-B0-1

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
TEL (905)712-5100  
FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.

SAMPLED BY: SG

## O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2025-04-28

DATE REPORTED: 2025-04-30

Parameter	Unit	SAMPLE DESCRIPTION:		SP-2	SP-22	SP-5	SP-7	SP-9	SP-11
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2025-04-28 09:05	2025-04-28 09:10	2025-04-28 09:25	2025-04-28 09:35	2025-04-28 09:45	2025-04-28 09:55
		G / S	RDL	6694809	6694810	6694813	6694815	6694817	6694819
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.12	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.16	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.56	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.23	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	0.59	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	13.4	15.1	15.4	13.6	11.7	13.1
<b>Surrogate</b>	<b>Unit</b>	<b>Acceptable Limits</b>							
Naphthalene-d8	%	50-140		85	89	96	73	85	84
Acridine-d9	%	50-140		74	74	71	85	86	76
Terphenyl-d14	%	50-140		71	106	72	95	108	110

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6694809-6694819** Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 25H282719

PROJECT: GTR-24000672-B0-1

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CANADA L4Z 1Y2  
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<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.

SAMPLED BY: SG

## O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2025-04-28

DATE REPORTED: 2025-04-30

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:	SP-2	SP-22	SP-5	SP-7	SP-9	SP-11
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2025-04-28 09:05	2025-04-28 09:10	2025-04-28 09:25	2025-04-28 09:35	2025-04-28 09:45	2025-04-28 09:55	2025-04-28 09:55
				6694809	6694810	6694813	6694815	6694817	6694819	6694819
F1 (C6 to C10)	µg/g	25	5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	7	<7	<7	<7	<7	<7	<7	<7
F2 (C10 to C16) minus Naphthalene	µg/g		7	<7	<7	<7	<7	<7	<7	<7
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	13.4	15.1	15.4	13.6	11.7	13.1	
Surrogate	Unit	Acceptable Limits								
Toluene-d8	%	50-140		101	99	98	95	90	91	
Terphenyl	%	60-140		103	84	87	91	83	89	

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6694809-6694819** Results are based on sample dry weight.  
The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



# Certificate of Analysis

AGAT WORK ORDER: 25H282719

PROJECT: GTR-24000672-B0-1

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.

SAMPLED BY: SG

## O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2025-04-28

DATE REPORTED: 2025-04-30

Parameter	Unit	SAMPLE DESCRIPTION:		SP-2	SP-22	SP-5	SP-7	SP-9	SP-11
		G / S	RDL	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2025-04-28	2025-04-28	2025-04-28	2025-04-28	2025-04-28	2025-04-28
				09:05	09:10	09:25	09:35	09:45	09:55
				6694809	6694810	6694813	6694815	6694817	6694819
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By: 

# Certificate of Analysis

AGAT WORK ORDER: 25H282719

PROJECT: GTR-24000672-B0-1

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<http://www.agatlabs.com>

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.

SAMPLED BY: SG

## O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2025-04-28

DATE REPORTED: 2025-04-30

Parameter	Unit	SAMPLE DESCRIPTION:		SP-2	SP-22	SP-5	SP-7	SP-9	SP-11
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2025-04-28 09:05	2025-04-28 09:10	2025-04-28 09:25	2025-04-28 09:35	2025-04-28 09:45	2025-04-28 09:55
		G / S	RDL	6694809	6694810	6694813	6694815	6694817	6694819
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	13.4	15.1	15.4	13.6	11.7	13.1
Surrogate	Unit	Acceptable Limits							
Toluene-d8	% Recovery	50-140		101	99	98	95	90	91
4-Bromofluorobenzene	% Recovery	50-140		98	84	100	90	86	83

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**6694809-6694819** The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.  
 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.  
 1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
 The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

**Certified By:**



## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25H282719

PROJECT: GTR-24000672-B0-1

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.

SAMPLED BY: SG

Soil Analysis															
RPT Date: Apr 30, 2025			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - Metals (Including Hydrides) (Soil)**

Antimony	6683929		<0.8	<0.8	NA	< 0.8	93%	70%	130%	119%	80%	120%	94%	70%	130%
Arsenic	6683929		3	4	NA	< 1	116%	70%	130%	119%	80%	120%	129%	70%	130%
Barium	6683929		50.2	50.8	1.2%	< 2.0	107%	70%	130%	105%	80%	120%	121%	70%	130%
Beryllium	6683929		<0.5	<0.5	NA	< 0.5	96%	70%	130%	97%	80%	120%	95%	70%	130%
Boron	6683929		7	7	NA	< 5	81%	70%	130%	96%	80%	120%	92%	70%	130%
Cadmium	6683929		<0.5	<0.5	NA	< 0.5	107%	70%	130%	103%	80%	120%	107%	70%	130%
Chromium	6683929		18	18	NA	< 5	109%	70%	130%	100%	80%	120%	107%	70%	130%
Cobalt	6683929		7.2	7.5	4.1%	< 0.8	107%	70%	130%	105%	80%	120%	105%	70%	130%
Copper	6683929		16.7	17.7	5.8%	< 1.0	100%	70%	130%	101%	80%	120%	104%	70%	130%
Lead	6683929		7	7	0.0%	< 1	108%	70%	130%	100%	80%	120%	102%	70%	130%
Molybdenum	6683929		<0.5	<0.5	NA	< 0.5	112%	70%	130%	102%	80%	120%	109%	70%	130%
Nickel	6683929		16	16	0.0%	< 1	109%	70%	130%	104%	80%	120%	128%	70%	130%
Selenium	6683929		<0.8	<0.8	NA	< 0.8	101%	70%	130%	101%	80%	120%	106%	70%	130%
Silver	6683929		<0.5	<0.5	NA	< 0.5	96%	70%	130%	107%	80%	120%	100%	70%	130%
Thallium	6683929		<0.5	<0.5	NA	< 0.5	94%	70%	130%	107%	80%	120%	109%	70%	130%
Uranium	6683929		<0.50	<0.50	NA	< 0.50	104%	70%	130%	107%	80%	120%	113%	70%	130%
Vanadium	6683929		29.4	29.5	0.3%	< 2.0	118%	70%	130%	104%	80%	120%	105%	70%	130%
Zinc	6683929		37	40	7.8%	< 5	102%	70%	130%	101%	80%	120%	111%	70%	130%

Comments: NA Signifies Not Applicable.  
 Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By:




## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25H282719

PROJECT: GTR-24000672-B0-1

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.

SAMPLED BY: SG

### Trace Organics Analysis

RPT Date: Apr 30, 2025			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)**

F2 (C10 to C16)	6683443		< 10	< 10	NA	< 7	108%	60%	140%	102%	60%	140%	76%	60%	140%
F3 (C16 to C34)	6683443		< 50	< 50	NA	< 50	106%	60%	140%	110%	60%	140%	83%	60%	140%
F4 (C34 to C50)	6683443		< 50	< 50	NA	< 50	68%	60%	140%	70%	60%	140%	69%	60%	140%

**O. Reg. 153(511) - PAHs (Soil)**

Naphthalene	6681539		<0.05	<0.05	NA	< 0.05	97%	50%	140%	103%	50%	140%	98%	50%	140%
Acenaphthylene	6681539		<0.05	<0.05	NA	< 0.05	114%	50%	140%	98%	50%	140%	98%	50%	140%
Acenaphthene	6681539		<0.05	<0.05	NA	< 0.05	111%	50%	140%	98%	50%	140%	98%	50%	140%
Fluorene	6681539		<0.05	<0.05	NA	< 0.05	118%	50%	140%	95%	50%	140%	100%	50%	140%
Phenanthrene	6681539		<0.05	<0.05	NA	< 0.05	118%	50%	140%	85%	50%	140%	88%	50%	140%
Anthracene	6681539		<0.05	<0.05	NA	< 0.05	122%	50%	140%	90%	50%	140%	93%	50%	140%
Fluoranthene	6681539		<0.05	<0.05	NA	< 0.05	108%	50%	140%	100%	50%	140%	103%	50%	140%
Pyrene	6681539		<0.05	<0.05	NA	< 0.05	120%	50%	140%	100%	50%	140%	100%	50%	140%
Benzo(a)anthracene	6681539		<0.05	<0.05	NA	< 0.05	89%	50%	140%	103%	50%	140%	73%	50%	140%
Chrysene	6681539		<0.05	<0.05	NA	< 0.05	115%	50%	140%	100%	50%	140%	105%	50%	140%
Benzo(b)fluoranthene	6681539		<0.05	<0.05	NA	< 0.05	121%	50%	140%	83%	50%	140%	85%	50%	140%
Benzo(k)fluoranthene	6681539		<0.05	<0.05	NA	< 0.05	119%	50%	140%	108%	50%	140%	103%	50%	140%
Benzo(a)pyrene	6681539		<0.05	<0.05	NA	< 0.05	113%	50%	140%	83%	50%	140%	80%	50%	140%
Indeno(1,2,3-cd)pyrene	6681539		<0.05	<0.05	NA	< 0.05	98%	50%	140%	95%	50%	140%	73%	50%	140%
Dibenz(a,h)anthracene	6681539		<0.05	<0.05	NA	< 0.05	92%	50%	140%	85%	50%	140%	73%	50%	140%
Benzo(g,h,i)perylene	6681539		<0.05	<0.05	NA	< 0.05	100%	50%	140%	80%	50%	140%	88%	50%	140%

**O. Reg. 153(511) - VOCs (with PHC) (Soil)**

Dichlorodifluoromethane	6678825		< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	89%	50%	140%	98%	50%	140%
Vinyl Chloride	6678825		< 0.02	< 0.02	NA	< 0.02	98%	50%	140%	101%	50%	140%	86%	50%	140%
Bromomethane	6678825		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	99%	50%	140%	95%	50%	140%
Trichlorofluoromethane	6678825		< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	85%	50%	140%	83%	50%	140%
Acetone	6678825		< 0.50	< 0.50	NA	< 0.50	95%	50%	140%	101%	50%	140%	86%	50%	140%
1,1-Dichloroethylene	6678825		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	98%	60%	130%	101%	50%	140%
Methylene Chloride	6678825		< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	93%	60%	130%	86%	50%	140%
Trans- 1,2-Dichloroethylene	6678825		< 0.05	< 0.05	NA	< 0.05	99%	50%	140%	89%	60%	130%	94%	50%	140%
Methyl tert-butyl Ether	6678825		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	89%	60%	130%	83%	50%	140%
1,1-Dichloroethane	6678825		< 0.02	< 0.02	NA	< 0.02	86%	50%	140%	85%	60%	130%	92%	50%	140%
Methyl Ethyl Ketone	6678825		< 0.50	< 0.50	NA	< 0.50	79%	50%	140%	92%	50%	140%	84%	50%	140%
Cis- 1,2-Dichloroethylene	6678825		< 0.02	< 0.02	NA	< 0.02	95%	50%	140%	90%	60%	130%	93%	50%	140%
Chloroform	6678825		< 0.04	< 0.04	NA	< 0.04	90%	50%	140%	101%	60%	130%	86%	50%	140%
1,2-Dichloroethane	6678825		< 0.03	< 0.03	NA	< 0.03	86%	50%	140%	100%	60%	130%	86%	50%	140%
1,1,1-Trichloroethane	6678825		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	98%	60%	130%	94%	50%	140%
Carbon Tetrachloride	6678825		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	95%	60%	130%	98%	50%	140%
Benzene	6678825		< 0.02	< 0.02	NA	< 0.02	100%	50%	140%	93%	60%	130%	86%	50%	140%

## Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25H282719

PROJECT: GTR-24000672-B0-1

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.

SAMPLED BY: SG

### Trace Organics Analysis (Continued)

RPT Date: Apr 30, 2025			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
1,2-Dichloropropane	6678825		< 0.03	< 0.03	NA	< 0.03	95%	50%	140%	88%	60%	130%	82%	50%	140%	
Trichloroethylene	6678825		< 0.03	< 0.03	NA	< 0.03	79%	50%	140%	86%	60%	130%	94%	50%	140%	
Bromodichloromethane	6678825		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	91%	60%	130%	90%	50%	140%	
Methyl Isobutyl Ketone	6678825		< 0.50	< 0.50	NA	< 0.50	94%	50%	140%	94%	50%	140%	88%	50%	140%	
1,1,2-Trichloroethane	6678825		< 0.04	< 0.04	NA	< 0.04	98%	50%	140%	86%	60%	130%	86%	50%	140%	
Toluene	6678825		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	83%	60%	130%	91%	50%	140%	
Dibromochloromethane	6678825		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	101%	60%	130%	99%	50%	140%	
Ethylene Dibromide	6678825		< 0.04	< 0.04	NA	< 0.04	88%	50%	140%	95%	60%	130%	86%	50%	140%	
Tetrachloroethylene	6678825		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	86%	60%	130%	94%	50%	140%	
1,1,1,2-Tetrachloroethane	6678825		< 0.04	< 0.04	NA	< 0.04	88%	50%	140%	94%	60%	130%	89%	50%	140%	
Chlorobenzene	6678825		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	83%	60%	130%	88%	50%	140%	
Ethylbenzene	6678825		< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	86%	60%	130%	90%	50%	140%	
m & p-Xylene	6678825		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	88%	60%	130%	88%	50%	140%	
Bromoform	6678825		< 0.05	< 0.05	NA	< 0.05	94%	50%	140%	95%	60%	130%	99%	50%	140%	
Styrene	6678825		< 0.05	< 0.05	NA	< 0.05	109%	50%	140%	99%	60%	130%	95%	50%	140%	
1,1,2,2-Tetrachloroethane	6678825		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	95%	60%	130%	86%	50%	140%	
o-Xylene	6678825		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	86%	60%	130%	82%	50%	140%	
1,3-Dichlorobenzene	6678825		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	82%	60%	130%	84%	50%	140%	
1,4-Dichlorobenzene	6678825		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	81%	60%	130%	101%	50%	140%	
1,2-Dichlorobenzene	6678825		< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	95%	60%	130%	100%	50%	140%	
n-Hexane	6678825		< 0.05	< 0.05	NA	< 0.05	79%	50%	140%	96%	60%	130%	89%	50%	140%	

**Certified By:** \_\_\_\_\_



## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25H282719

PROJECT: GTR-24000672-B0-1

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.

SAMPLED BY: SG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Soil Analysis</b>			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS

## Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 25H282719

PROJECT: GTR-24000672-B0-1

ATTENTION TO: Amanda Catenaro

SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.

SAMPLED BY: SG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Trace Organics Analysis</b>			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 25H282719**
**PROJECT: GTR-24000672-B0-1**
**ATTENTION TO: Amanda Catenaro**
**SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.**
**SAMPLED BY: SG**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

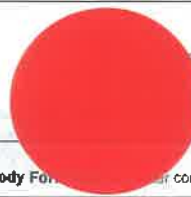
## Method Summary

**CLIENT NAME: EXP SERVICES INC**
**AGAT WORK ORDER: 25H282719**
**PROJECT: GTR-24000672-B0-1**
**ATTENTION TO: Amanda Catenaro**
**SAMPLING SITE: Four Mice Creek Rd, N.O.T.L.**
**SAMPLED BY: SG**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS



Have feedback?  
Scan here for a quick survey!



5835 Coopers Avenue  
Mississauga, Ontario L4Z 1Y2  
5100 Fax: 905.712.5122  
wcbearth.agatlabs.com

### Laboratory Use Only

Work Order #: JH 2527 <sup>19</sup>

Cooler Quantity: LG

Arrival Temperatures: 75 | 78 | 82

Depot Temperatures: 75 | 78 | 82

Custody Seal Intact:  Yes  No  N/A

Notes: LOOSE ICE

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form for samples consumed by humans)

### Report Information:

Company: EXP Services Inc

Contact: Amanda Catenaro / Accounts Payable

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reports to be sent to:

1. Email: amanda.catenaro@exp.com

2. Email: scott.grant-hosc@exp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Regulation 406  Sewer Use  
 Sanitary  Storm

Table Indicate One  Ind/Com  Res/Park  Agriculture

Table Indicate One  Ind/Com  Res/Park  Agriculture

Soil Texture (Check One)  Coarse  Fine  Regulation 558  CCME

Region: \_\_\_\_\_

Prov. Water Quality Objectives (PWQO)  Other \_\_\_\_\_

Indicate One

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

3 Business Days  2 Business Days  Next Business Day

OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

### Project Information:

Project: GTR-24000672-B0-1

Site Location: Four Mile Creek Rd, N.O.T.L.

Sampled By: SG

AGAT Quote #: \_\_\_\_\_ PO: GTR-24000672-B0-1

Please note: If quotation number is not provided, client will be billed full price for analysis.

### Is this submission for a Record of Site Condition (RSC)?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Invoice Information:

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Email: AP@exp.com

Bill To Same: Yes  No

### Legal Sample

### Sample Matrix Legend

GW Ground Water SD Sediment  
 O Oil SW Surface Water  
 P Paint R Rock/Shale  
 S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	O. Reg 153	O. Reg 406	O. Reg 558	Potential Hazardous or High Concentration (Y/N)
1. SP-11	2025/04/08	9:55 AM	4	S				Metals & Inorganics Metals <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB BTEX, F1-F4, PHCs VOC PAHs PCBs: Aroclors <input type="checkbox"/>	Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4 EC, SAR Regulation 406 SPLP Rainwater Leach mSPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs <input type="checkbox"/> DOC Landfill Disposal Characterization TCLP: TCLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> ABHS <input type="checkbox"/> BialP <input type="checkbox"/> PCBs Corrosivity: <input type="checkbox"/> Moisture <input type="checkbox"/> Sulphide		
2.		AM									
3.		AM									
4.		AM									
5.		AM									
6.		AM									
7.		AM									
8.		AM									
9.		AM									
10.		AM									
11.		AM									

metals including hydrolyzing metals

Samples Relinquished By (Print Name and Sign): <u>Scott Grant Hosc SG-H</u>	Date: <u>2025/01/20</u> Time: <u>1:25</u>	Samples Received By (Print Name and Sign): <u>DMC</u>	Date: <u>APR 28/25</u> Time: <u>1:25 PM</u>
Samples Relinquished By (Print Name and Sign): <u>DMC</u>	Date: <u>APR 28/25</u> Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>Wendy Namraj</u>	Date: <u>APR 28/25</u> Time: <u>1:25 PM</u>
Samples Relinquished By (Print Name and Sign):	Date: _____ Time: _____	Samples Received By (Print Name and Sign):	Date: _____ Time: _____

EXP Services Inc.

*Phase Two Environmental Site Assessment  
1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario  
GTR-24000672-C0  
November 7, 2024; Revised May 26, 2025*

## Appendix K – Non-Potable Acceptance Letter

**Infrastructure Planning and Development**

1815 Sir Isaac Brock Way, Thorold, ON L2V 4T7  
905-980-6000 Toll-free: 1-800-263-7215

---

**Via Email Only**

May 16, 2025

File No.: PLOTH202500974

Amanda Catenaro, M. E.Sc., P.Geo., QP  
Senior Project Manager  
EXP  
1266 South Service Road  
Stoney Creek, ON L8E 5R9

Dear Ms. Catenaro:

**Re: Response to Notification of Intent to Apply Non-Potable Groundwater Site  
Condition Standards  
Address: 1544 and 1546 Four Mile Creek Road  
Town of Niagara-on-the-Lake**

---

This letter is in response to the notification of intent to use non-potable groundwater site condition standards for an application for Record of Site Condition for lands municipally known as 1544 and 1546 Four Mile Creek Road, in the Town of Niagara-on-the-Lake.

In accordance with Ontario Regulation 153/04 (Record of Site Condition), as amended, non-potable ground water condition standards may only be applied where, if the property is located in a two-tier municipality, the municipality that has the authority under the *Municipal Act, 2001* to pass by-laws respecting water production, treatment and storage (s.35 (2)), has given written notice to the owner that it does not object to the application of the standards. Niagara Region is the applicable municipality under the *Municipal Act* and Ontario Regulation 153/04.

There are three criteria in Ontario Regulation 153/04, Section 35(2), as amended, upon which the Region can provide comment. Specifically, non-potable groundwater site condition standards can be applied:

- a) If the property, and all other properties located, in whole or in part, within 250 metres of the boundaries of the property, are supplied by a municipal drinking water system, as defined in the *Safe Drinking Water Act, 2002*;

- b) If either of the following circumstances apply, the municipality has consented in writing to the application of non-potable groundwater site condition standards for the property:
- i) The property is located in an area designated in a municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater.
  - ii) The property or one of the properties in the phase one study area has a well used or intended for use as a source of water for human consumption or agriculture.
- c) If neither of the circumstances under above section b) apply:
- i) Notice has been given of the intention to apply the standards in preparing a record of site condition for the property.

With regard to criterion (a), municipal water service is available to the subject property, and certain properties located within 250 metres. The subject property is located near the settlement area boundary for the Town of Niagara-on-the-Lake and is therefore in proximity to properties situated outside the boundary. **Lands outside the settlement area boundary are generally expected to rely on private servicing.**

With regard to criterion (b)(i), the Niagara Official Plan (NOP) does not designate any well-head protection areas, and the property is not located in an area identified for the protection of groundwater under the Source Water Protection policies (Section 3.3 of the NOP). As such, criterion (b)(i) is met.

With regard to criterion (b)(ii), information obtained from the Ministry of the Environment, Conservation and Parks' (MECP) Water Well Record Map and database indicates that there is one (1) well located within 250 metres of the subject property, as listed below:

Well ID	Well Type
3801077	Domestic

The applicant submitted information with their request indicating that, based on site observations and interviews, the well is no longer operational. Additionally, the surrounding lands fall within the settlement area boundary and therefore have access to municipal water services.

Therefore, based on the information provided, Regional staff are satisfied that there are no domestic water wells within 250 metres of the subject property's boundary. As such, criterion (b)(ii) is met.

## Conclusion

Regional staff offer no objection to the requested application of non-potable groundwater site condition standards for the subject lands, in accordance with Section 35 (2) b) i) and ii) of Ontario Regulation 153/04.

May 16, 2025

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If you have any questions related to the above comments, please contact me at [amy.shanks@niagararegion.ca](mailto:amy.shanks@niagararegion.ca).

Kind regards,

A handwritten signature in black ink that reads "Amy Shanks". The signature is fluid and cursive, with the first name "Amy" being more prominent than the last name "Shanks".

Amy Shanks, MCIP, RPP  
Senior Development Planner

cc: Victoria Nikoltcheva, Senior Planner, Town of Niagara-on-the-Lake