Phase Two Environmental Site Assessment

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

Client:
On The Lake Developments Inc.

Type of Document:
Final

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

Project Number:
GTR-24000672-C0

EXP Services Inc.
220 Commerce Valley Drive West, Suite 110
Markham, ON
L3T 0A8
t: 905.695.3217
f: 905.695.0169

Date Submitted:
November 7, 2024
Revised January 13, 2025
Revised March 24, 2025
Revised April 9, 2025

Table of Contents

1 Executive Summary 6
2 Introduction 11
2.1 Site Description 11
2.2 Legal Description and Property Ownership 11
2.3 Current and Proposed Future Uses 12
2.4 Applicable Site Condition Standards 12
3 Background Information 14
3.1 Physical Setting 14
3.2 Past Environmental Investigations 14
4 Scope of the Investigation 17
4.1 Overview of Site Investigation 17
4.2 Media Investigated 17
4.3 Deviations from Sampling and Analysis Plan (SAAP) 18
4.4 Impediments 18
5 Phase One Conceptual Site Model 19
6 Investigation Method 26
6.1 General 26
6.2 Drilling and Test Pitting Program 26
6.3 Soil Sampling 26
6.4 Field Screening Measurements 27
6.5 Groundwater: Monitoring Well Installation 27
6.6 Monitoring Well Development 28
6.7 Groundwater Field Measurements of Water Quality Parameters 28
6.8 Groundwater Sampling 29
6.9 Sediment Sampling 29
6.10 Analytical Testing 29
6.11 Residue Management Procedures 29

6.12 Elevation Survey 29
6.13 Quality Assurance and Quality Control Measures 30
7 Review and Evaluation 31
7.1 Geology 31
7.1.1. Surficial Material 31
7.1.2. Fill Material 31
7.1.3. Native Soils 31
7.1.4 Bedrock 31
7.2 Groundwater: Elevations and Flow Direction 31
7.2.1 Groundwater: Hydraulic Conductivity 32
7.2.2 Groundwater: Horizontal Hydraulic Gradients 32
7.3 Soil Texture 32
7.4 Soil Field Screening 33
7.5 Soil Quality 33
7.5.1 Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) 33
7.5.2 Volatile Organic Compounds (VOCs) 33
7.5.3 Polycyclic Aromatic Hydrocarbons (PAHs) 33
7.5.4 Metals (including Hydride-Forming Metals) and Other Regulated Parameters (B-HWS, Cr (VI), Hg, CN) 34
7.5.5 Electrical Conductivity and Sodium Adsorption Ratio 34
7.5.6 Soil pH 34
7.5.7 Polychlorinated Biphenyls (PCBs) 34
7.5.8 Organochlorine Pesticides (OCPs) 35
7.5.9 Chemical Transformation and Soil Contaminant Sources 35
7.5.10 Evidence of Non-Aqueous Phase Liquid 35
7.6 Groundwater Quality 35
7.6.1 Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) 35

7.6.2 Volatile Organic Compounds (VOCs) 36
7.6.3 Polycyclic Aromatic Hydrocarbons (PAHs) 36
7.6.4 Metals (including Hydride-Forming Metals) and ORPs (including Cr(VI), CN- and Hg) 36
7.6.5 Sodium (Na) and chloride (Cl) 37
7.6.6 Chemical Transformation and Groundwater Contaminant Sources 37
7.6.7 Evidence of Non-Aqueous Phase Liquid (NAPL) 37
7.7 Sediment Quality 37
7.8 Quality Assurance and Quality Control Results 38
7.9 Phase Two Conceptual Site Model 40
8 Conclusions 41
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

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 6A: Groundwater Contour Plan – October 2024

Figure 6B: Groundwater Contour Plan – December 2024

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

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 22: On and Off-Site Human Health Conceptual Site Model

Figure 23: 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 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 it 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)[1]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern[2]	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	On-Site	PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B,	Soil

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)[1]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern[2]	Media Potentially Impacted (Groundwater, soil and/or sediment)
		Material of Unknown Quality		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 identified polycyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene, and xylenes (BTEX), and metal exceedances in the round 1 sampling event. 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 metal exceedances. 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\5 (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 1: Full Depth Background Site Condition Standards (SCS) for Residential/Parkland/Institutional/Commerical/Community/Industrial (RPI/ICC) property use, and medium to fine textured soils (hereinafter referred to as the “Table 1 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 1 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 1 SCS for PHCs;

  - 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;

  - 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.

- 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_{ESA}'s opinion that the elevated levels of EC are not exceedances of the applicable Table 1 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 1 SCS with the exception of ethylbenzene, PAHs (anthracene, chrysene, phenanthrene, pyrene), and metals (cobalt, nickel, selenium, and uranium), as follows:

  - 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);

  - 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);

  - Uranium exceedance above the Table 1 SCS were identified in BH2-23 (having a screen depth of 4.42 to 7.47).

- 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 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:

  - 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 BH7-0 (having screen depths of 4.57 to 7.62).

  - A vanadium exceedance above the Table 1 SCS was identified in BH5-23 (having a screen depth of 5.33 to 6.85 mbgs).

- 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:
    - 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).
    - 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).
- Given the two (2) consecutive clean rounds of groundwater sampling for nickel and selenium at BH5-23, these contaminants are not considered to be in exceedances of the Table 1 SCS at the Site.
- 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 1 SCS for PHCs and groundwater in exceedance of the Table 1 SCS for metals (cobalt, uranium and vanadium) must be addressed prior to filing an RSC.

EXP is currently planning to re-sample the elevated pH values at the Site and remediate the soil PHC impacts at BH4 and historical location BH1-23. Further, a non-potable request application will be submitted to the Niagara Region, in order to apply Table 9 Standards to the Site. Pending favourable outcomes to these items and once subsequent reporting are completed, 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 15m 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 it 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.

Municipal Address(es)	1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario
Current Land Use	Residential/Commercial
Proposed Land Use	Residential/Commercial
Legal Description	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
Property Identification Number (PIN)	46383-0086 (LT) 46383-0087 (LT)

Approximate Universal Transverse Mercator (UTM) coordinates	NAD83 17T 652530 m E 4786792 m N
Accuracy Estimate of UTM	10-15 m
Measurement Method	GPS
Site Area	1.07 hectares (2.64 acres)
Property Owner	Esfandiar Aghaei and On The Lake Developments Inc.
Owner Contact Address	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 it 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 1: Full Depth Background SCS for Residential/Parkland/Institutional/Commercial/Community/Industrial (RPI/ICC) property use, and medium to fine textured soils (hereinafter referred to as the "Table 1 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 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 the *Town of Niagara-on-the-Lake Official Plan (2017),* this wetland is understood to be a provincially significant wetland;
  - According to Schedule C of the *Town of Niagara-on-the-Lake Official Plan (2017),* the Site is adjacent to a Conservation Area;
  - Six (6) 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. As such, the pH of surface soils at the Site is considered to be a "Sensitive Site" as per O. Reg. 153/04, Section 41; 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;
- 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
- "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 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 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). According to Part 3 – Land Use Policies, the Four Mile Creek estuary is understood to be a provincially significant wetland.

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	*Phase I Environmental*	Ball Land Developments	Englobe Corp.	• The site is developed with a one story residential dwelling and one slab-on-grade

Date	Report Title	Prepared For	Prepared By	Findings of Areas of Potential Environmental Concern
	Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario			building that is utilized as a former marine (boat) repair shop originally built circa 1950-1960s. The site is bordered by woodland, residential, and a creek reservoir, beyond which are industrial/commercial. • 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). • 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. • An environmental subsurface investigation to assess the quality of the soil and groundwater on the site was recommended.
November 17, 2023	*Phase I-II Environmental Site Assessment, 1544 and 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario*	Andres Bell Construction Ltd.	Paterson Group	• A Phase I ESA was completed for the property and adjacent properties. • The site was historically and currently used as a service garage for construction and marine vehicles. • The site has been noted for the presence of former USTs. There was also evidence of the importation of fill of poor quality. • Five (5) boreholes (BH1-23 to BH5-23) were advanced on the Phase II Property on September 25, 2023. • 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. • A total of five (5) soil samples were submitted to Paracel Laboratories for analysis of a combination of one or more of metals, pH, polcyclic aromatic hydrocarbons (PAHs), benzene, toluene, ethylbenzene, and xylenes (BTEX), and petroleum hydrocarbons (PHCs) fractions F1 to F4. • 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. • Two of the boreholes (BH3-23 and BH4-23) were noted to have visual and olfactory signs of

Date	Report Title	Prepared For	Prepared By	Findings of Areas of Potential Environmental Concern
				possible contamination found at 0.7 – 1.45 mbgs; however, no exceedances were identified. • Groundwater samples were recovered from two of the three monitoring wells (BH1-23 and BH5-23) on October 5, 2023. • The groundwater samples were submitted to Paracel Laboratories for analysis of volatile organic compounds (VOCs) (including BTEX), PAHs, and PHCs. • There were no groundwater exceedances identified above the selected MECP Table 8 standards. • 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. • An assessment determined that future remediation would consist of the area around the former underground fuel storage tank and would generate approximately 70 m^3 of contaminated soil, and the area where imported fill was identified would generate approximately 1,000 m^3 to 1,600 m^3 of impacted fill material.
October 7, 2024	Phase One Environmental Site Assessment, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario	On The Lake Developments Inc.	EXP Services Inc.	• 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). • Several APECs were identified on the Site. As such, an RSC cannot be filed based on the Phase One ESA alone. • 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. • 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.

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. EXP also wanted to conduct their own sampling program and confirm soil and groundwater concentrations at the Site, in advance of the remediation program, risk assessment and/or RSC submission.

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_{ESA}), 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)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
Site (On-Site PCAs)					
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

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	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
Surrounding Properties (Off-Site PCAs)					
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)	Based on the ERIS report and city directories, Niagara Fruit & Vegetable Growers Ltd. was listed as a wholesale	No, based on the cross-gradient location relative to the Site.

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
			Manufacturing, Processing, Bulk Storage and Large-Scale Applications	pesticide vendor, and was 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	No, based on the cross-gradient location relative to the Site.

PCA Identifier	Address	Location of Activity (in relation to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
				station has been located at this property since 1988.	
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)[1]	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)[2]	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 is it 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
- "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 24th and September 26th, 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 ±10% of the standard gas value, then the instrument is deemed to be calibrated, however if the readings are greater than ±10% of the standard gas value then the instrument is re-calibrated prior to use. The vapour concentrations are accurate to within ±5% of reading or ±2% LEL (whichever is greater) in the 0-100% LEL range and to within ±50 ppm or ±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 ±0.01 pH, EC from 0 to 3,999 µS/cm ±2% full scale (F.S.), TDS from 0 to 2,000 ppm (mg/L) ±2% F.S., and temperature from 0.0 to 60.0˚C ±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 1.0×10^{-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;

Δh (m) = groundwater elevation difference; and,

Δs (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 1.0×10^{-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 µm 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 1 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 1 SCS for BTEX and PHCs;

The laboratory RDLs are below the Table 1 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 1 SCS or not detected above the laboratory RDLs.

The laboratory RDLs are below the Table 1 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 1 SCS or the laboratory RDLs.

The laboratory RDLs are below the Table 1 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 1 SCS or the laboratory RDLs.

The laboratory RDLs are below the Table 1 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 1 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 1 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_{ESA}'s opinion that the elevated levels of EC are not exceedances of the applicable Table 1 SCS.

The laboratory RDLs are below the Table 1 SCS. The results are presented in Table 9 and Figure 11.

7.5.6 Soil pH

Seven (7) 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, as the Table 1 SCS are applicable to the Site, these pH values are in line with the application of these standards.

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 1 SCS or not detected above the laboratory RDLs.

The laboratory RDLs are below the Table 1 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 1 SCS or not detected above the laboratory RDLs.

The laboratory RDLs are below the Table 1 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.

Chemical constituents were not detected in the soil samples. Chemical transformation is not anticipated.

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 identified PAHs, BTEX, and metal exceedances from the first sampling event.

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 metal exceedances.

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 1 SCS or the laboratory RDLs with the following exception:

- An ethylbenzene exceedance above the Table 1 SCS was identified in BH4 (having a screen depth of 0.91 to 3.96 mbgs) on October 2, 2024. During the two consecutive rounds of groundwater sampling on November 21 (round 2) and December 2 (round 3), the concentrations of all PHC parameters and BTEX in the analyzed groundwater samples at BH4 were either detected below the applicable Table 1 SCS or the laboratory RDLs. As such, BH4 is considered to be within the Table 1 SCS for PHCs and BTEX.

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 1 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.

During initial sampling, the concentrations of all PAH parameters in the analyzed groundwater samples were either below the Table 1 SCS or not detected above the laboratory RDLs with the following exceptions:

- PAH (anthracene, chrysene, phenanthrene, pyrene) exceedances above the Table 1 SCS was identified in BH4 (having a screen depth of 0.91 to 3.96 mbgs). During the two consecutive rounds of groundwater sampling on November 21 (round 2) and December 2 (round 3), the concentrations of all PAH parameters in the analyzed groundwater samples were either detected below the applicable Table 1 SCS or the laboratory RDLs. As such, BH4 is considered to be within the Table 1 SCS for PAHs.

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.

During initial sampling in October 2024 (round 1), the concentrations of all metal and ORPs in the analyzed groundwater samples were either detected below the applicable Table 1 SCS or the laboratory RDLs with the following exceptions:

- 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).

- A uranium exceedance above the Table 1 SCS was identified in BH2-23 (having a screen depth of 4.42 to 7.47).

During the November 2024 (round 2) supplemental sampling, the concentrations of all metal parameters in the analyzed groundwater samples were either detected below the applicable Table 1 SCS or the laboratory RDLs with the exception of the following;

- 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 BH7-0 (having screen depths of 4.57 to 7.62).

- A vanadium exceedance above the Table 1 SCS was identified in BH5-23 (having a screen depth of 5.33 to 6.85 mbgs).

During the December 2024 (round 3) supplemental sampling, the concentrations of all metal parameters in the analyzed groundwater samples were either detected below the applicable Table 1 SCS or the laboratory RDLs with following exceptions:

- 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).

- 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).

Given the two (2) consecutive clean rounds of groundwater sampling for nickel and selenium at BH5-23, these contaminants are not considered to be in exceedances of the Table 1 SCS at the Site.

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.

During initial and supplemental sampling, the sodium and chloride were not detected above the applicable Table 1 SCS in the analyzed samples.

The laboratory RDLs are below the Table 1 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.

The ethylbenzene and PAH exceedances initially identified at BH4 were further assessed during supplemental investigations; no exceedances in PAH or BTEX were identified in groundwater samples for November (round 2) and December (round 3) events. Metal impacts initially identified at BH2-23 and BH5-23 remained present during supplemental investigations, and additional metal impacts were identified at BH3 and BH7. Cobalt and vanadium exceedances present at BH5-23 are likely associated with the equipment and marine vehicle repair shop (APEC 1). Uranium exceedances identified at BH3, BH7, BH2-23, and BH5-23 are likely associated with background conditions, representative of the bedrock and soil type in the vicinity of the Site.

No significant chemical transformations are expected.

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 MECP (2011) Table 1: Full Depth Background Site Condition Standards (SCS) for Residential/Parkland/Institutional/Commerical/Community/Industrial (RPI/ICC) property use, and medium to fine textured soils (hereinafter referred to as the "Table 1 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 1 SCS with the exception of the concentration of selenium in sample BH5-23. However, BH5-23 was re-sampled during round 2 and round 3 of groundwater monitoring and was found to be within the Table 1 SCS both times. As such, it was removed as a COC. 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 1 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.

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 identified PAHs, BTEX, and metal exceedances in the round 1 sampling event. 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 metal exceedances. 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\5 (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 1 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 1 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 1 SCS for PHCs;

    - 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;

    - 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.

- 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_{ESA}'s opinion that the elevated levels of EC are not exceedances of the applicable Table 1 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 1 SCS with the exception of ethylbenzene, PAHs (anthracene, chrysene, phenanthrene, pyrene), and metals (cobalt, nickel, selenium, and uranium), as follows:

    - 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);

    - 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);

    - Uranium exceedance above the Table 1 SCS were identified in BH2-23 (having a screen depth of 4.42 to 7.47).

- 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 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:

    - 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 BH7-0 (having screen depths of 4.57 to 7.62).

  - A vanadium exceedance above the Table 1 SCS was identified in BH5-23 (having a screen depth of 5.33 to 6.85 mbgs).

- 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:

  - 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).

  - 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).

- Given the two (2) consecutive clean rounds of groundwater sampling for nickel and selenium at BH5-23, these contaminants are not considered to be in exceedances of the Table 1 SCS at the Site.

- 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 1 SCS for PHCs and groundwater in exceedance of the Table 1 SCS for metals (cobalt, uranium and vanadium) must be addressed prior to filing an RSC.

EXP is currently planning to re-sample the elevated pH values at the Site and remediate the soil PHC impacts at BH4 and historical location BH1-23. Further, a non-potable request application will be submitted to the Niagara Region, in order to apply Table 9 Standards to the Site. Pending favourable outcomes to these items and once subsequent reporting are completed, 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.

This report was prepared for the exclusive use of by On The Lake Developments Inc. and may not be reproduced in whole or in part, without the prior written consent of EXP, or used or relied upon in whole or in part by other parties for any purposes whatsoever. Any use which a third party makes of this report, or any part thereof, 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.

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

Amanda Catenaro, P. Geo, QP_{ESA}
Senior Project Manager
Environmental Services

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.
- 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

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
	***De-minimis* PCAs**
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 biosoils a 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

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

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

LAND USE

- COMMERCIAL
- RESIDENTIAL
- AGRICULTURAL
- INSITUTIONAL
- 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.:	DWN:
GTR-24000672-C0	MS
SCALE:	CHKD:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	2

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two .aprx

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- ABOVE GROUND STORAGE TANK
- UNDERGROUND STORAGE TANK
- APPROXIMATE SITE BOUNDARY

TITLE AND LOCATION:

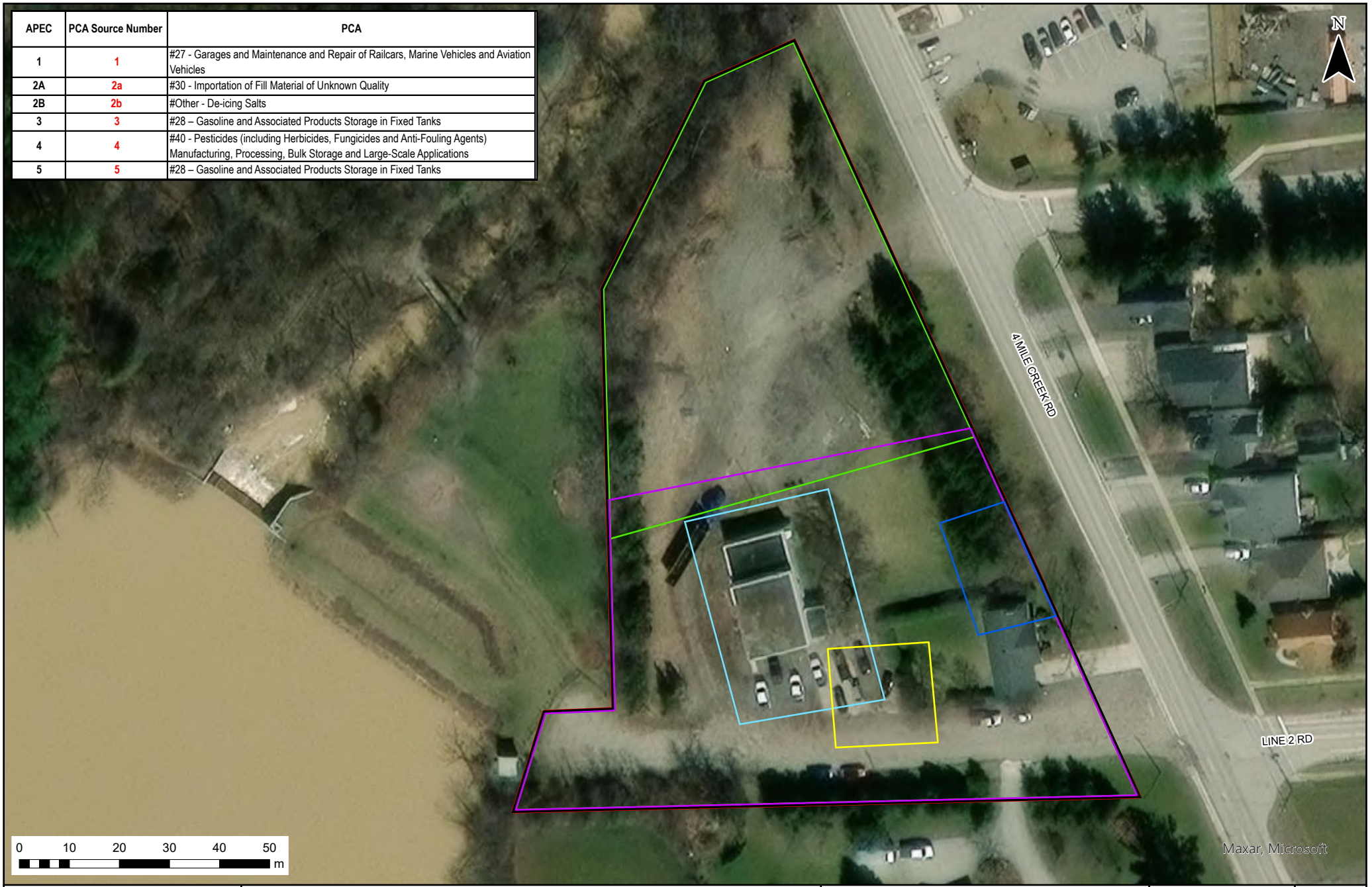
SITE PLAN

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: DECEMBER 2024	FIG. NO.: 3

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

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



EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

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

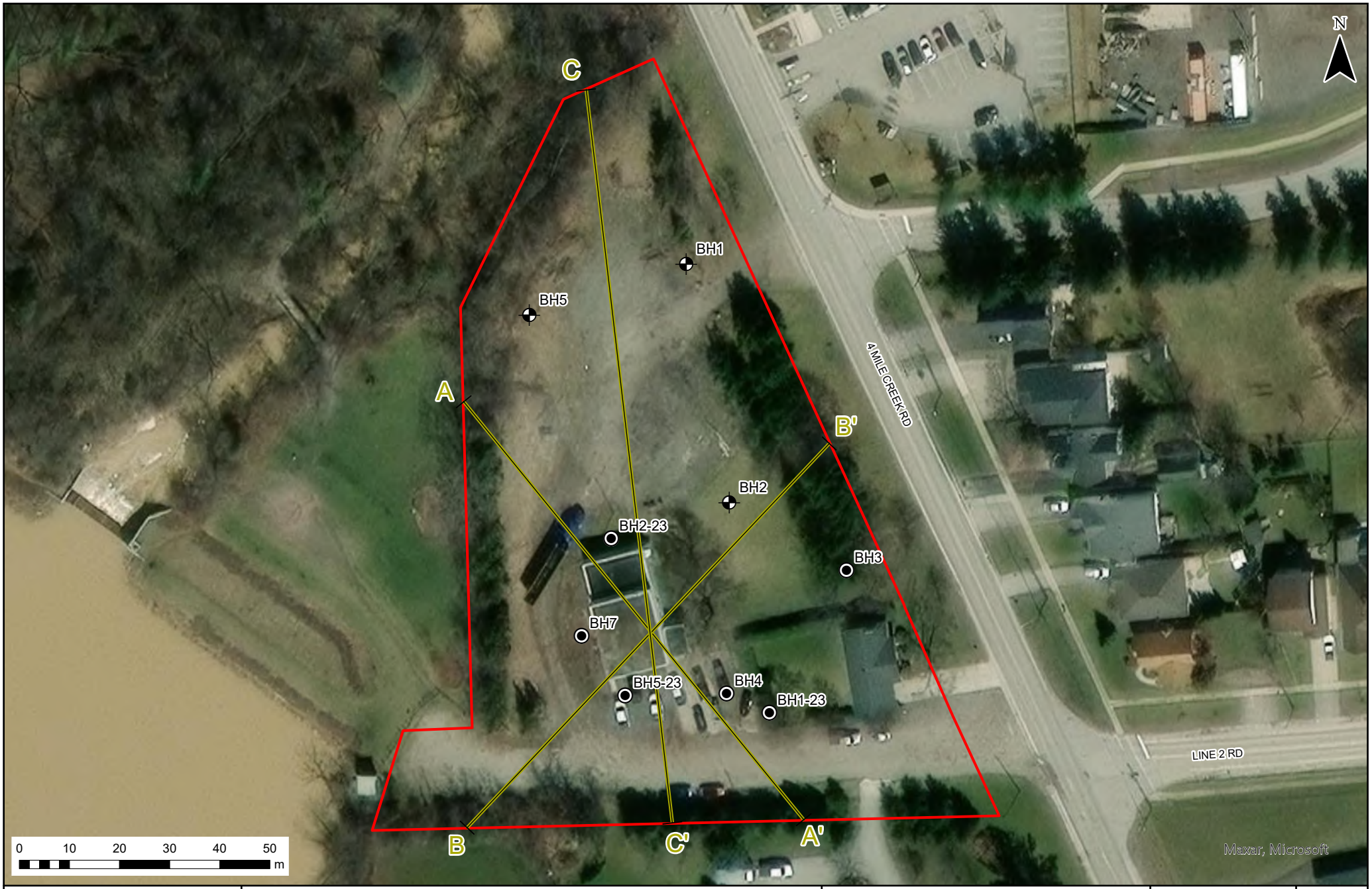
TITLE AND LOCATION:

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: DECEMBER 2024	FIG. NO.: 4

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx



EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- BOREHOLE
- BOREHOLE / MONITORING WELL
- CROSS SECTION AXIS
- APPROXIMATE SITE BOUNDARY

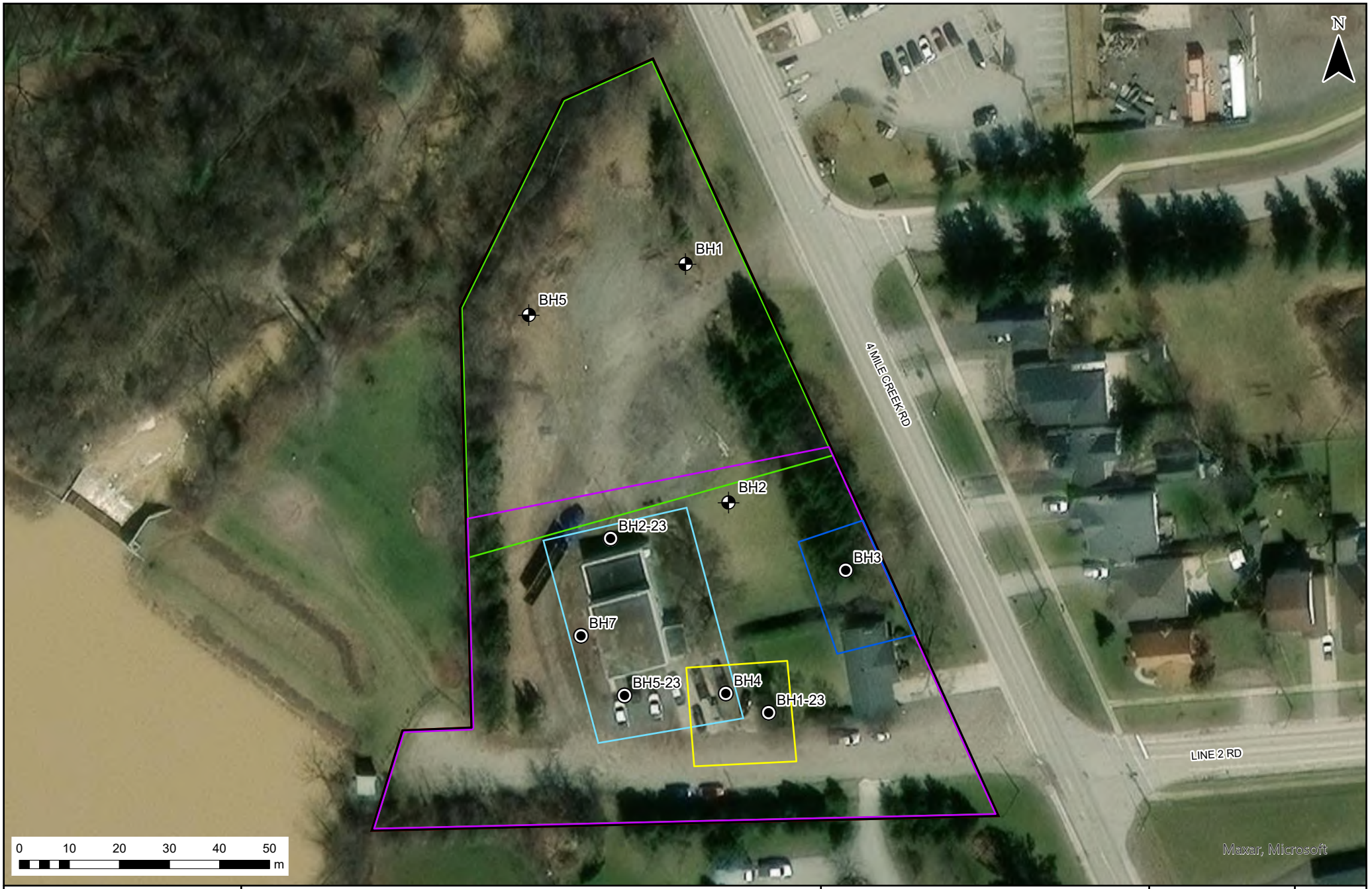
TITLE AND LOCATION:

BOREHOLE / MONITORING WELL LOCATION PLAN

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

PROJECT NO.: GTR-24000672-C0	DWN: MS
SCALE: AS NOTED	CHKD: AC
DATE: DECEMBER 2024	FIG. NO.: 5A

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx



EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- BOREHOLE
- BOREHOLE / MONITORING WELL
- APEC 1
- APEC 2A
- APEC 2B
- APEC 3
- APEC 4
- APEC 5
- APPROXIMATE SITE BOUNDARY

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.:	DWN:
GTR-24000672-C0	MS
SCALE:	CHKD:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	5B

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

EXP Services Inc.

t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- BOREHOLE
- BOREHOLE / MONITORING WELL
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- XX.XX GROUNDWATER ELEVATION (masl) AS MEASURED ON OCTOBER 02, 2024
- APPROXIMATE SITE BOUNDARY

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

PROJECT NO.: GTR-24000672-C0	DWN: MS
SCALE: AS NOTED	CHKD: AC
DATE: DECEMBER 2024	FIG. NO.: 6A

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

EXP Services Inc.

t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- BOREHOLE
- BOREHOLE / MONITORING WELL
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- XX.XX GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024
- APPROXIMATE SITE BOUNDARY

TITLE AND LOCATION:

GROUNDWATER CONTOUR PLAN (DECEMBER 2024)

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: DECEMBER 2024	FIG. NO.: 6B

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

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

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

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
PHC F2 (C10-C16)	ug/g	10

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

BOLD Concentration exceeds Table 1 SCS

~ indicates field duplicate sample

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:
- SOIL SAMPLE EXCEEDS TABLE 1 SCS FOR PHCs
- SOIL SAMPLE MEETS TABLE 1 SCS FOR PHCs
- APPROXIMATE SITE BOUNDARY

TITLE AND LOCATION:
SOIL 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.:	DWN:
GTR-24000672-C0	MS
SCALE:	CHKD:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	7

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- SOIL SAMPLE MEETS TABLE 1 SCS FOR VOCs
- APPROXIMATE SITE BOUNDARY

~ 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

PROJECT NO.: GTR-24000672-C0	DWN: MS
SCALE: AS NOTED	CHKD: AC
DATE: DECEMBER 2024	FIG. NO.: 8

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- SOIL SAMPLE MEETS TABLE 1 SCS FOR PAHs
- APPROXIMATE SITE BOUNDARY

~ 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

PROJECT NO.:	DWN:
GTR-24000672-C0	MS
SCALE:	CHKD:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	9

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

BH1	0.0 - 0.61	6.09 - 6.70
	25-Sep-24	25-Sep-24
pH	**9.18**	7.03

BH5	0.0 - 0.61	6.09 - 6.70
	25-Sep-24	25-Sep-24
pH	**11.4**	6.95

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 1 SCS

BOLD pH value outside the O. Reg. 153/04 allowable range.

~ indicates field duplicate sample

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:
- SOIL SAMPLE EXCEEDS TABLE 1 SCS FOR METALS AND ORPs
- SOIL SAMPLE MEETS TABLE 1 SCS FOR METALS AND ORPs
- APPROXIMATE SITE BOUNDARY

TITLE AND LOCATION:
SOIL ANALYTICAL RESULTS - METALS, HYDRIDE-FORMING METALS, AND OTHER REGULATED PARAMETERS (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.:	DWN:
GTR-24000672-C0	MS
SCALE:	CHKD:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	10

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

BH5	0.0 - 0.61	6.09 - 6.70
	25-Sep-24	25-Sep-24
EC	**0.882**	0.256

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

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
Electrical Conductivity (EC)	mS/cm	0.57

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards
Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

BOLD Concentration is considered to meet Table 1 SCS per Section 49.1(1) of O. Reg. 153/04

~ indicated field duplicate sample

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:
- SOIL SAMPLE CONSIDERED TO MEET TABLE 1 SCS FOR EC AND SAR
- SOIL SAMPLE MEETS TABLE 1 SCS FOR EC AND SAR
- APPROXIMATE SITE BOUNDARY

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.:	DWN:
GTR-24000672-C0	MS
SCALE:	CHKD:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	11

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- SOIL SAMPLE MEETS TABLE 1 SCS FOR PCBs
- APPROXIMATE SITE BOUNDARY

~ 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

PROJECT NO.: GTR-24000672-C0	DWN: MS
SCALE: AS NOTED	CHKD: AC
DATE: DECEMBER 2024	FIG. NO.: 12

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- SOIL SAMPLE MEETS TABLE 1 SCS FOR OCPs
- APPROXIMATE SITE BOUNDARY

~ INDICATES A FIELD DUPLICATE SAMPLE

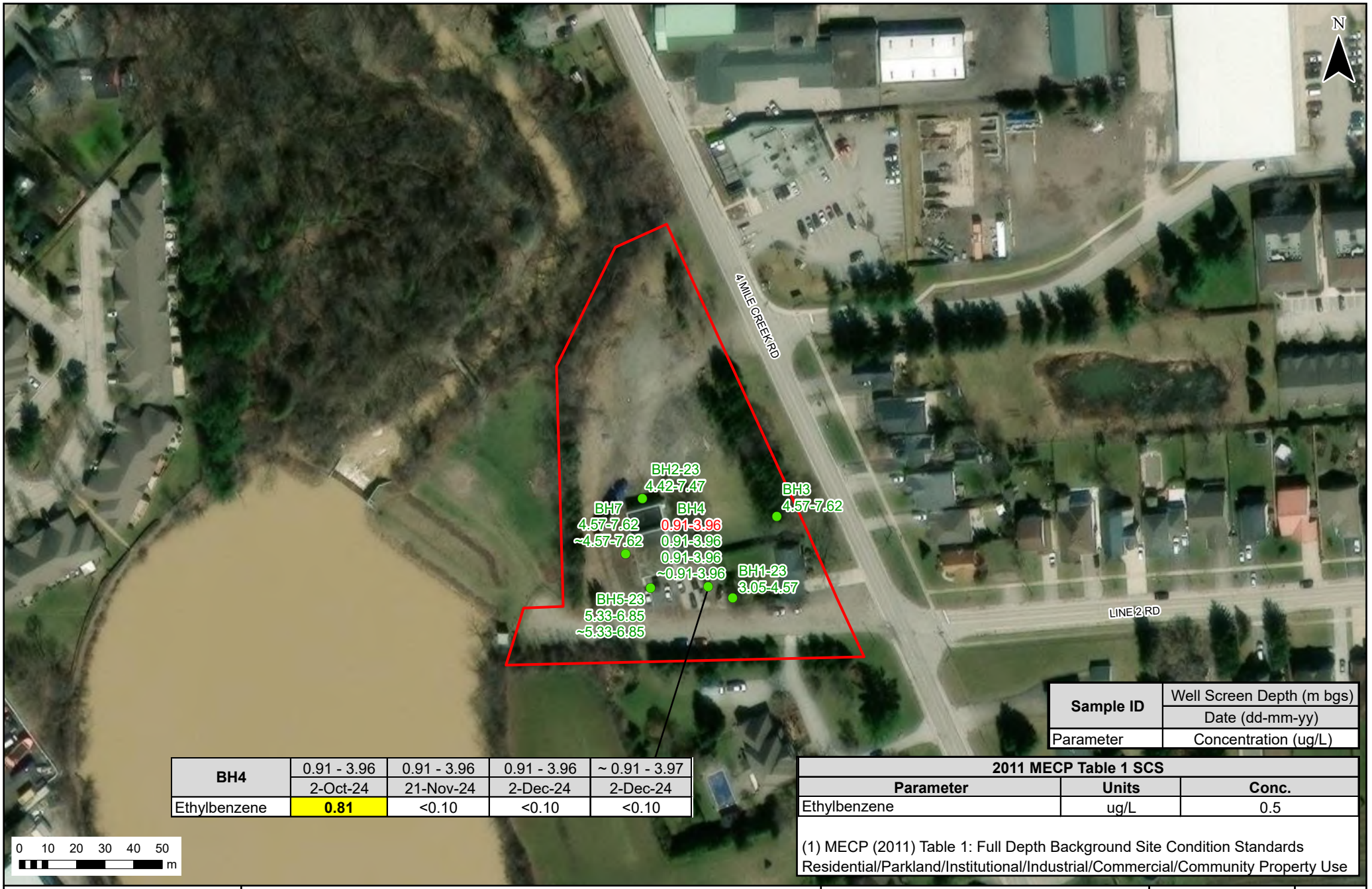
TITLE AND LOCATION:

SOIL ANALYTICAL RESULTS - ORGANOCHLORINE PESTICIDES (OCPs)

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: DECEMBER 2024	FIG. NO.: 13

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx



Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

BH4	0.91 - 3.96	0.91 - 3.96	0.91 - 3.96	~ 0.91 - 3.97
	2-Oct-24	21-Nov-24	2-Dec-24	2-Dec-24
Ethylbenzene	**0.81**	<0.10	<0.10	<0.10

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
Ethylbenzene	ug/L	0.5

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:
- GROUNDWATER SAMPLE MEETS TABLE 1 SCS FOR PHCs
- APPROXIMATE SITE BOUNDARY

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.:	DWN:
GTR-24000672-C0	MS
SCALE:	CHKD:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	14

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- GROUNDWATER SAMPLE MEETS TABLE 1 SCS FOR VOCs
- APPROXIMATE SITE BOUNDARY

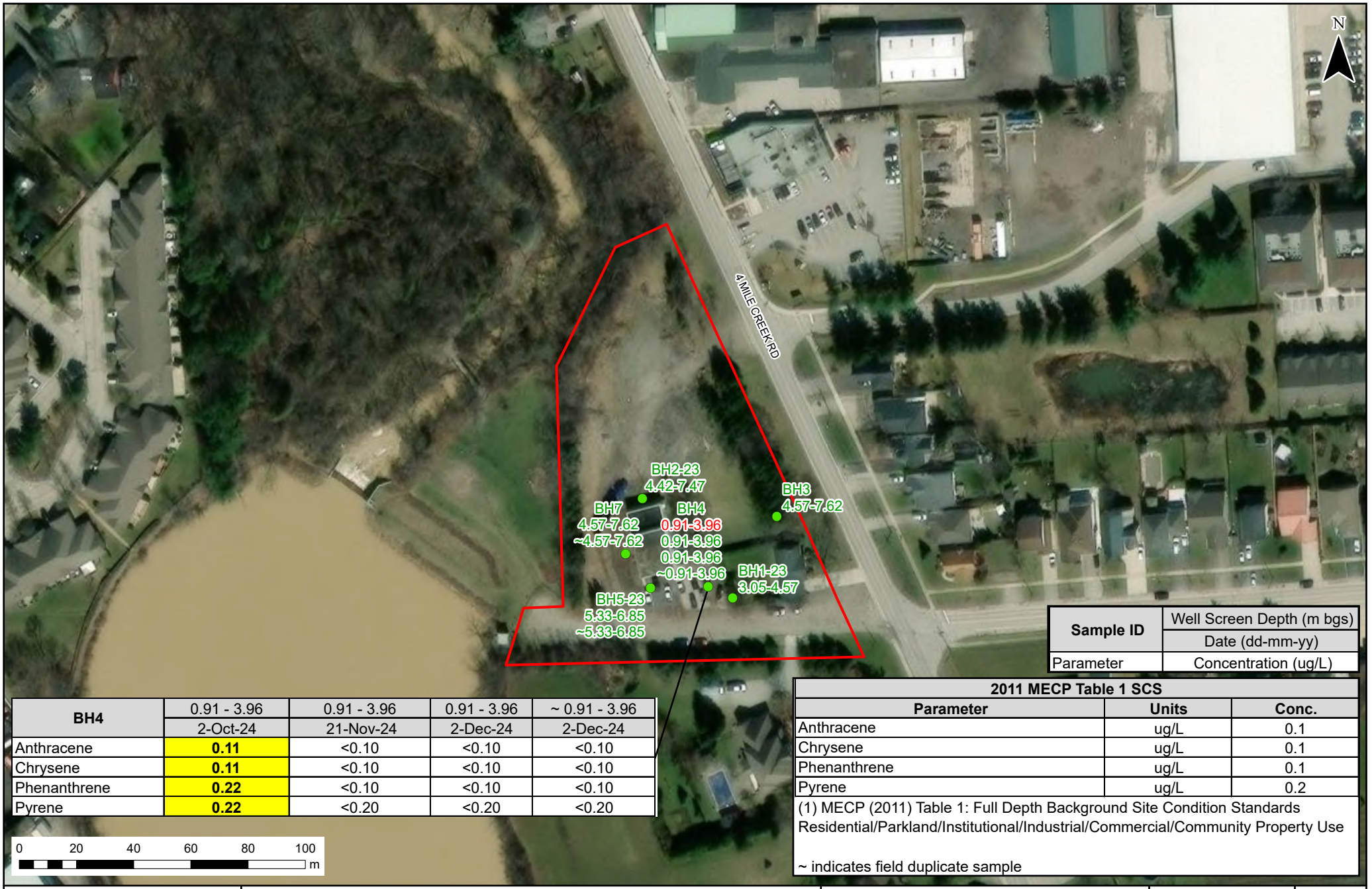
TITLE AND LOCATION:

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: MS
SCALE: AS NOTED	CHKD: AC
DATE: DECEMBER 2024	FIG. NO.: 15

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx



Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

BH4	0.91 - 3.96	0.91 - 3.96	0.91 - 3.96	~ 0.91 - 3.96
	2-Oct-24	21-Nov-24	2-Dec-24	2-Dec-24
Anthracene	**0.11**	<0.10	<0.10	<0.10
Chrysene	**0.11**	<0.10	<0.10	<0.10
Phenanthrene	**0.22**	<0.10	<0.10	<0.10
Pyrene	**0.22**	<0.20	<0.20	<0.20

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
Anthracene	ug/L	0.1
Chrysene	ug/L	0.1
Phenanthrene	ug/L	0.1
Pyrene	ug/L	0.2

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

~ indicates field duplicate sample

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:
- GROUNDWATER SAMPLE MEETS TABLE 1 SCS FOR PAHs
- APPROXIMATE SITE BOUNDARY

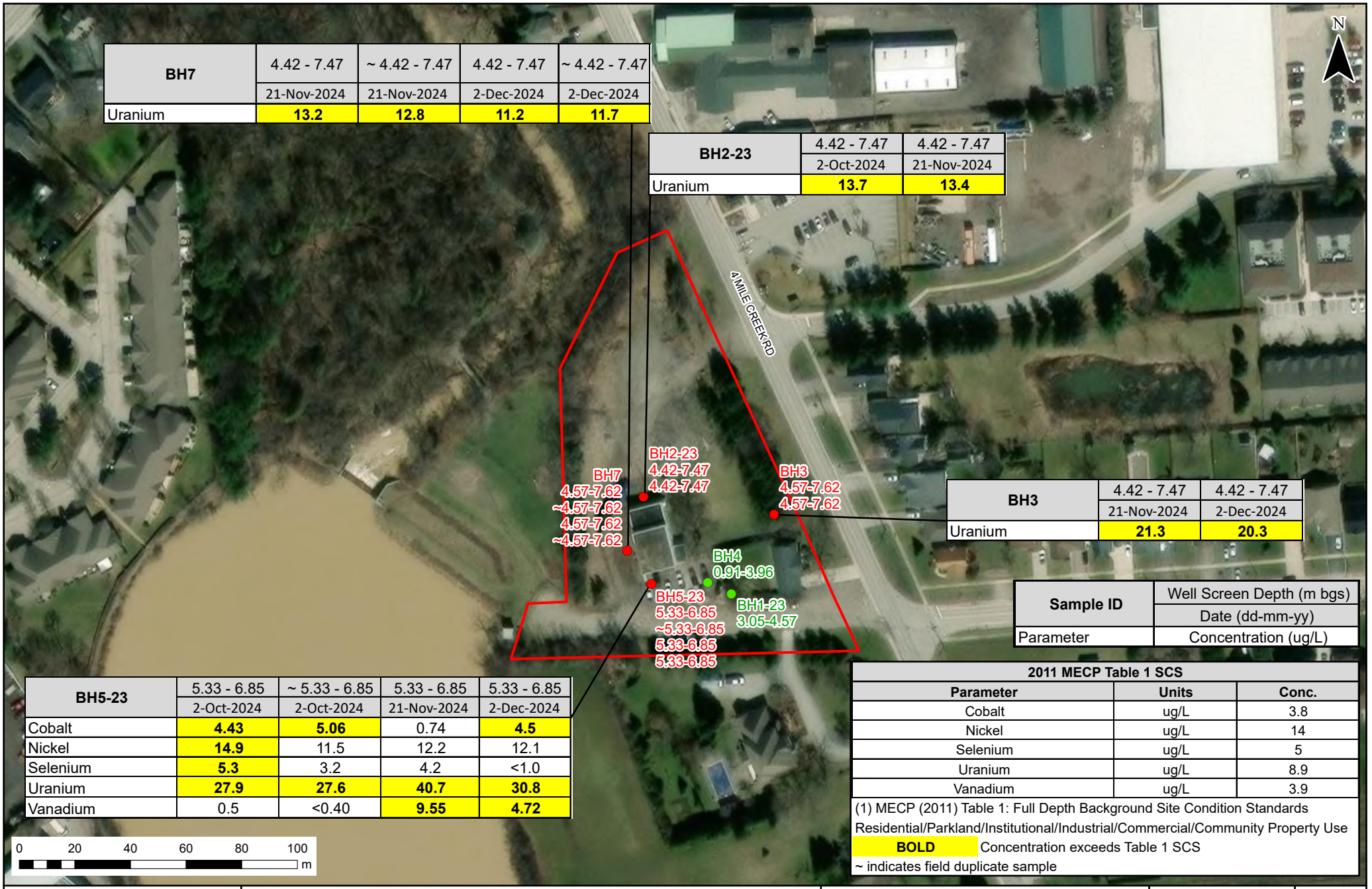
TITLE AND LOCATION:

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.:	DWN:
GTR-24000672-C0	MS
SCALE:	CHKD:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	16

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx



BH7	4.42 - 7.47	~ 4.42 - 7.47	4.42 - 7.47	~ 4.42 - 7.47
	21-Nov-2024	21-Nov-2024	2-Dec-2024	2-Dec-2024
Uranium	**13.2**	**12.8**	**11.2**	**11.7**

BH2-23	4.42 - 7.47	4.42 - 7.47
	2-Oct-2024	21-Nov-2024
Uranium	**13.7**	**13.4**

BH3	4.42 - 7.47	4.42 - 7.47
	21-Nov-2024	2-Dec-2024
Uranium	**21.3**	**20.3**

Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

BH5-23	5.33 - 6.85	~ 5.33 - 6.85	5.33 - 6.85	5.33 - 6.85
	2-Oct-2024	2-Oct-2024	21-Nov-2024	2-Dec-2024
Cobalt	**4.43**	**5.06**	0.74	**4.5**
Nickel	**14.9**	11.5	12.2	12.1
Selenium	**5.3**	3.2	4.2	<1.0
Uranium	**27.9**	**27.6**	**40.7**	**30.8**
Vanadium	0.5	<0.40	**9.55**	**4.72**

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
Cobalt	ug/L	3.8
Nickel	ug/L	14
Selenium	ug/L	5
Uranium	ug/L	8.9
Vanadium	ug/L	3.9

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

BOLD Concentration exceeds Table 1 SCS

~ indicates field duplicate sample

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:
- GROUNDWATER SAMPLE EXCEEDS TABLE 1 SCS FOR METALS AND ORPs
- GROUNDWATER SAMPLE MEETS TABLE 1 SCS FOR METALS AND ORPs
- APPROXIMATE SITE BOUNDARY

TITLE AND LOCATION:
GROUNDWATER ANALYTICAL RESULTS - METALS, HYDRIDE-FORMING METALS AND OTHER REGULATED PARAMETERS (Cr(VI), CN-, Hg)
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN:
GTR-24000672-C0	MS
SCALE:	CHKD:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	17

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- GROUNDWATER SAMPLE MEETS TABLE 1 SCS FOR Na AND Cl
- APPROXIMATE SITE BOUNDARY

~ INDICATES A FIELD DUPLICATE SAMPLE

TITLE AND LOCATION:

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

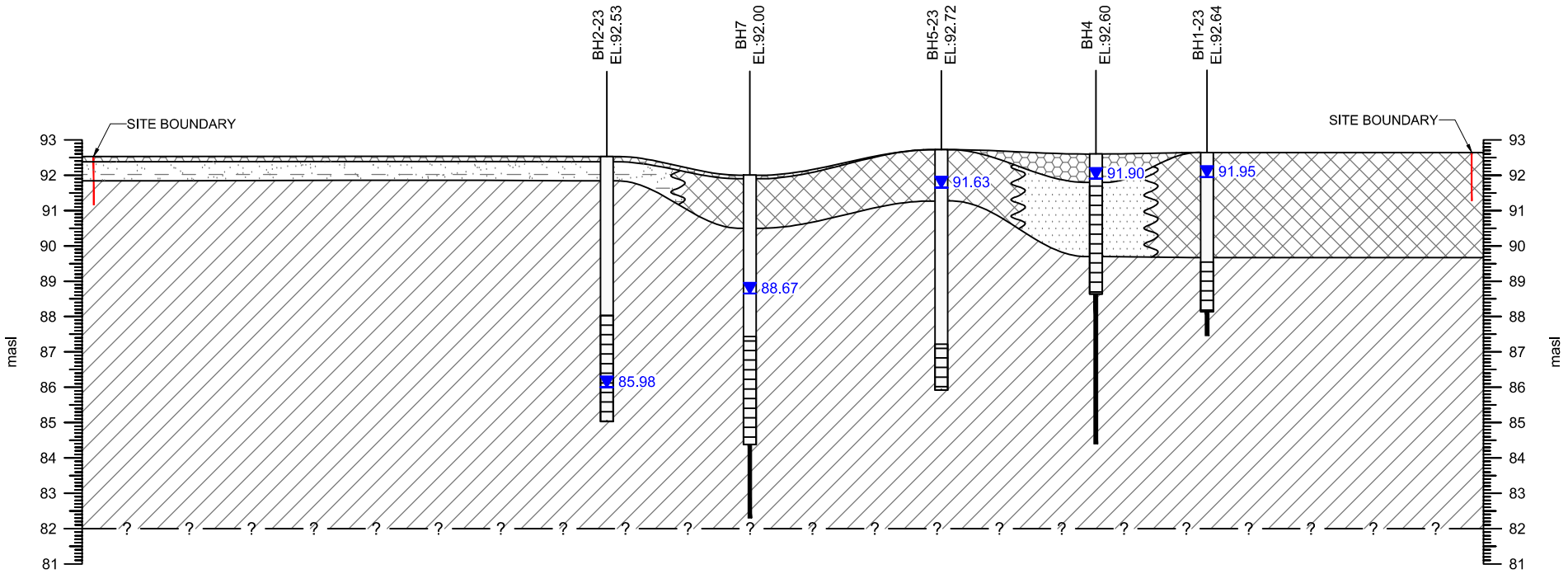
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.: GTR-24000672-C0	DWN: MS
SCALE: AS NOTED	CHKD: AC
DATE: DECEMBER 2024	FIG. NO.: 18

E:\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\GTR-24000672-C0\Phase Two.aprx

A
NORTHWEST

A'
SOUTHEAST



VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- TOPSOIL
- SILTY SAND
- FILL
- SAND
- SILTY CLAY TILL

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

TITLE AND LOCATION:

CROSS SECTION A-A'

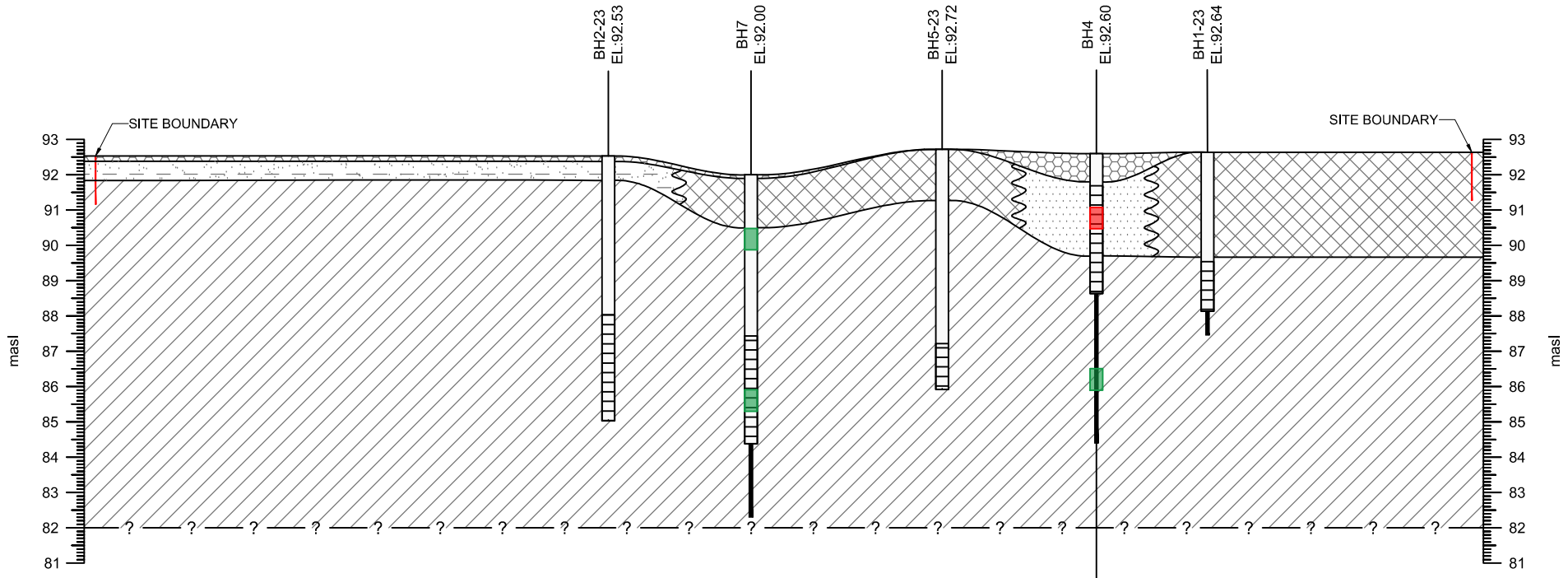
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.: GTR-24000672-C0	DWN.: MS
SCALE: AS NOTED	CK: AC
DATE: DECEMBER 2024	FIG. NO.: 19

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

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**

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

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
PHC F2 (C10-C16)	ug/g	10

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

BOLD Concentration exceeds Table 1 SCS

~ indicates field duplicate sample

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- TOPSOIL
- SILTY SAND
- FILL
- SAND
- SILTY CLAY TILL
- SOIL SAMPLE EXCEEDS TABLE 1 SCS FOR PHCs
- SOIL SAMPLE MEETS TABLE1 SCS FOR PHCs

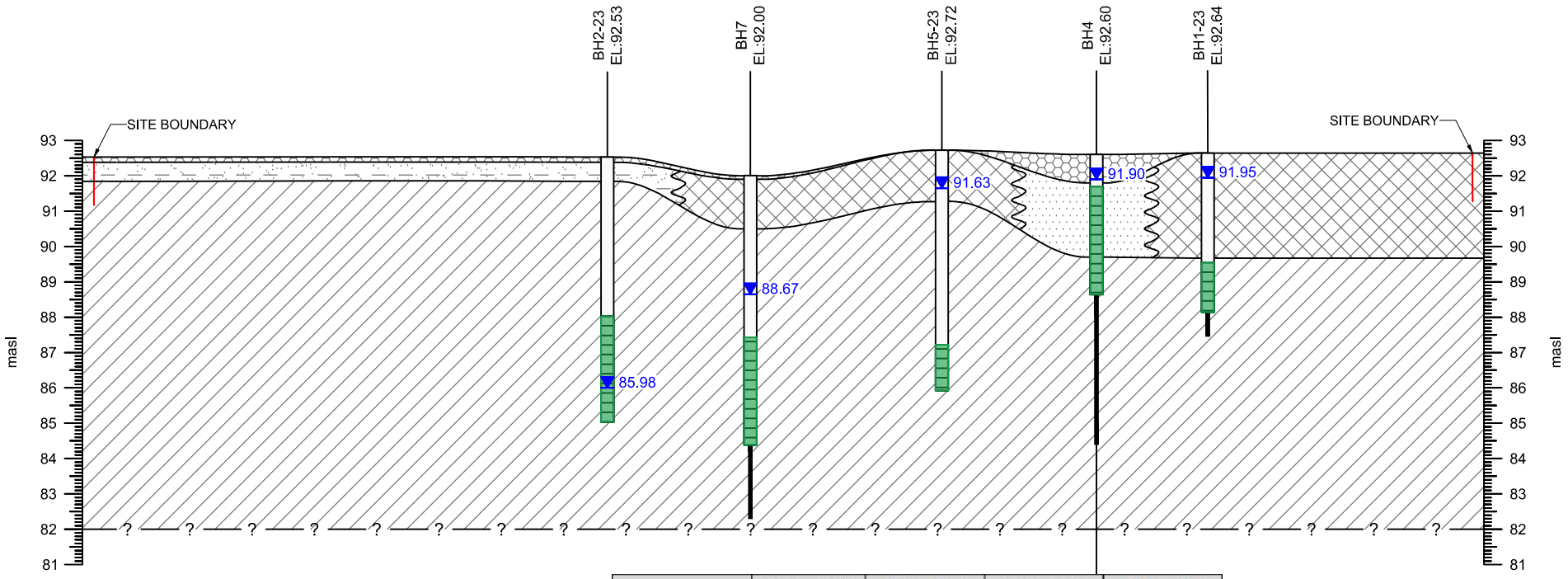
TITLE AND LOCATION:
CROSS SECTION A-A'
SOIL ANALYTICAL RESULTS - PETROLEUM HYDROCARBONS (PHCs) INCLUDING BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN.:
GTR-24000672-C0	MS
SCALE:	CK:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	19A

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

A
NORTHWEST

A'
SOUTHEAST



BH4	0.91 - 3.96	0.91 - 3.96	0.91 - 3.96	~ 0.91 - 3.97
	2-Oct-24	21-Nov-24	2-Dec-24	2-Dec-24
Ethylbenzene	**0.81**	<0.10	<0.10	<0.10

Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
Ethylbenzene	ug/L	0.5

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

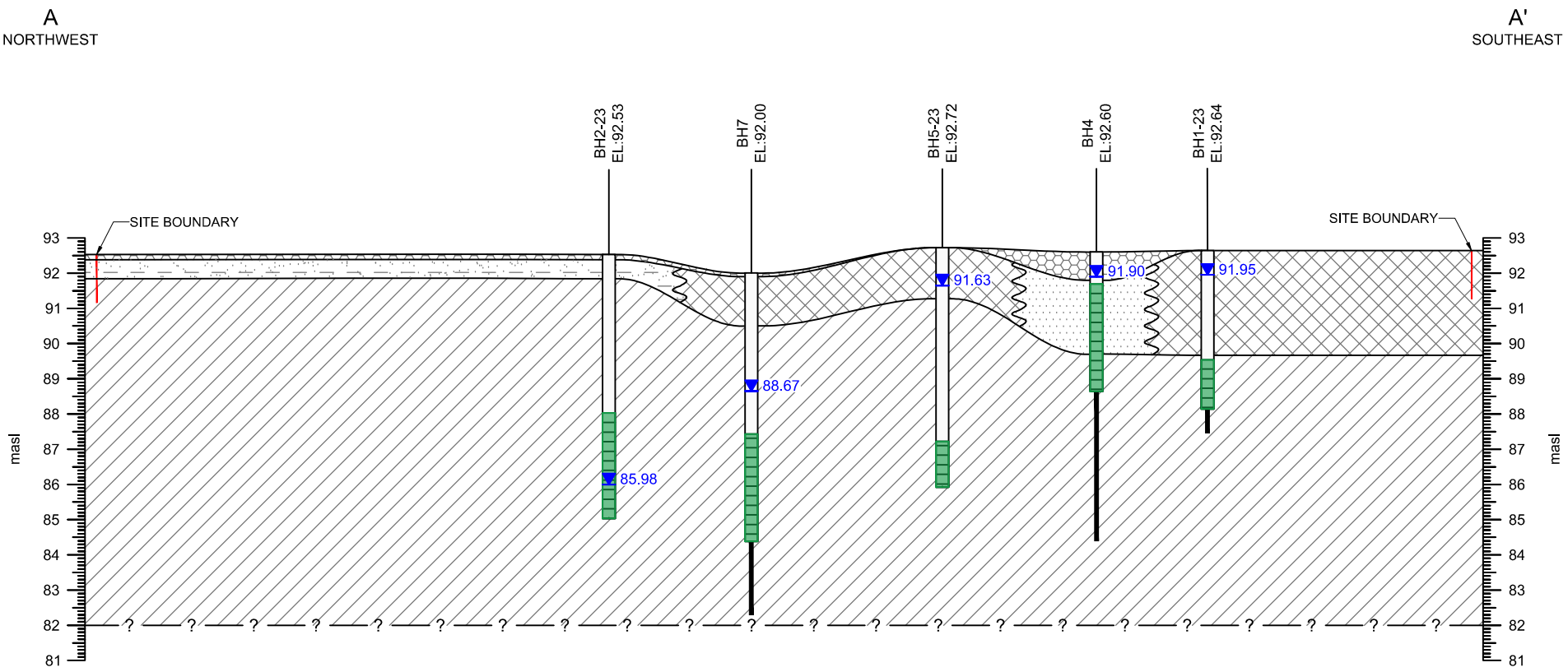
LEGEND:
- TOPSOIL
- SILTY SAND
- FILL
- SAND
- SILTY CLAY TILL

GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024
GROUNDWATER SAMPLE MEETS TABLE1 SCS FOR PHCs

TITLE AND LOCATION:
CROSS SECTION A-A'
GROUNDWATER 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.:
DECEMBER 2024	19B

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg



Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

2011 MECP Table 1 SCS		
Parameter	Units	Conc.
Ethylbenzene	ug/L	0.5

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- TOPSOIL
- SILTY SAND
- FILL
- SAND
- SILTY CLAY TILL

- GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024
- GROUNDWATER SAMPLE MEETS TABLE1 SCS FOR VOCs

TITLE AND LOCATION:

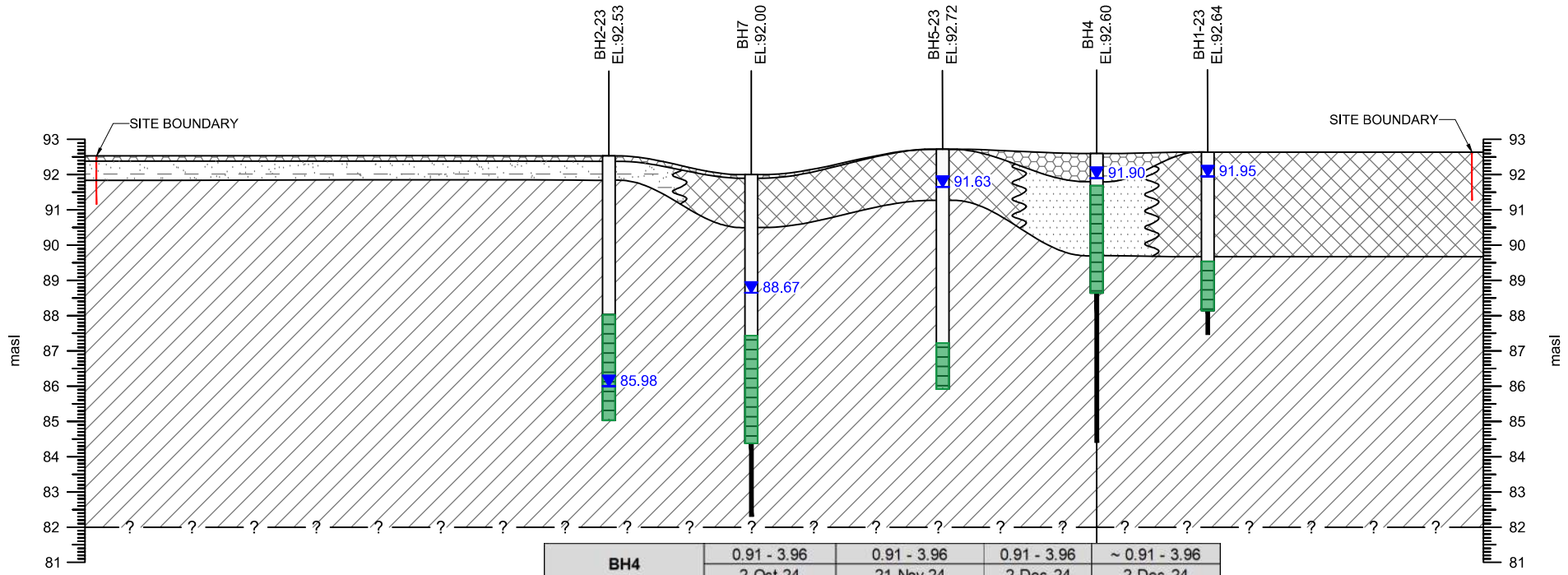
CROSS SECTION A-A'
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS (VOCs)
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN.:
GTR-24000672-C0	MS
SCALE:	CK:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	19C

\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

A
NORTHWEST

A'
SOUTHEAST



BH4	0.91 - 3.96	0.91 - 3.96	0.91 - 3.96	~ 0.91 - 3.96
	2-Oct-24	21-Nov-24	2-Dec-24	2-Dec-24
Anthracene	**0.11**	<0.10	<0.10	<0.10
Chrysene	**0.11**	<0.10	<0.10	<0.10
Phenanthrene	**0.22**	<0.10	<0.10	<0.10
Pyrene	**0.22**	<0.20	<0.20	<0.20

Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
Anthracene	ug/L	0.1
Chrysene	ug/L	0.1
Phenanthrene	ug/L	0.1
Pyrene	ug/L	0.2

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

~ indicates field duplicate sample

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:
- TOPSOIL
- SILTY SAND
- FILL
- SAND
- SILTY CLAY TILL

GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024
GROUNDWATER SAMPLE MEETS TABLE1 SCS FOR PAHs

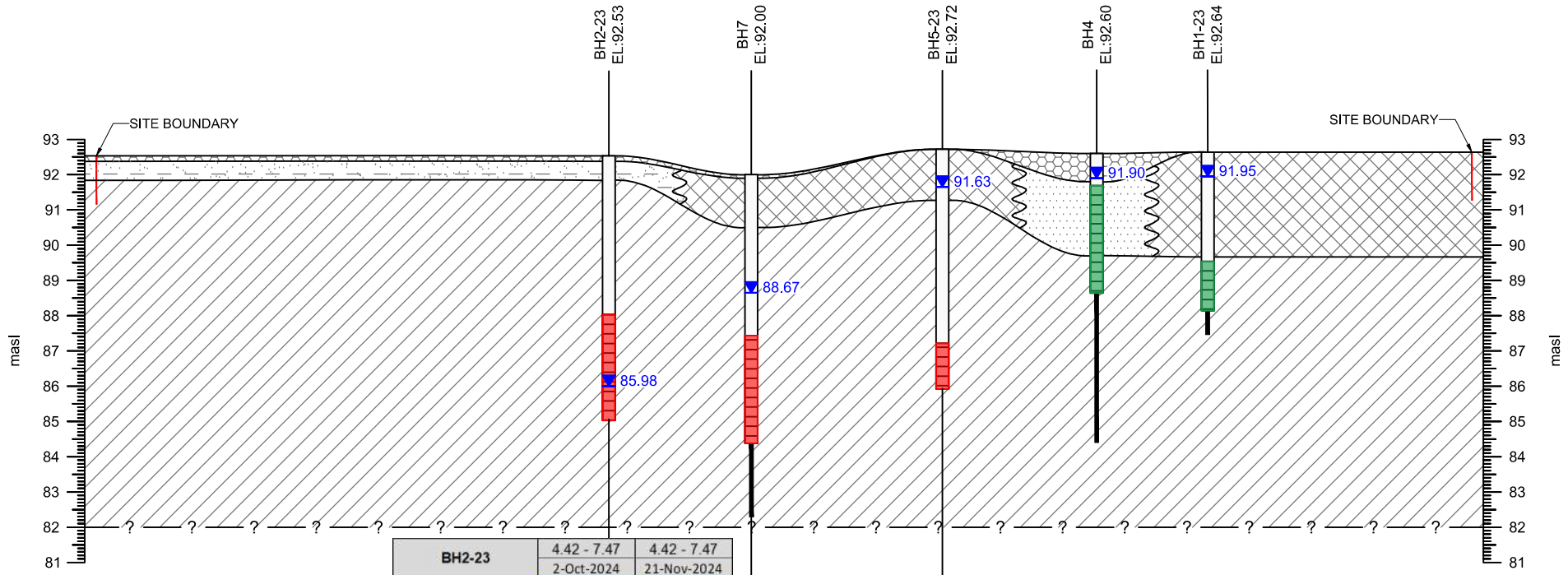
TITLE AND LOCATION:
CROSS SECTION A-A'
GROUNDWATER ANALYTICAL RESULTS - POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN.:
GTR-24000672-C0	MS
SCALE:	CK:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	19D

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

A
NORTHWEST

A'
SOUTHEAST



BH2-23	4.42 - 7.47	4.42 - 7.47
	2-Oct-2024	21-Nov-2024
Uranium	13.7	13.4

BH7	4.42 - 7.47	~ 4.42 - 7.47	4.42 - 7.47	~ 4.42 - 7.47
	21-Nov-2024	21-Nov-2024	2-Dec-2024	2-Dec-2024
Uranium	13.2	12.8	11.2	11.7

BH5-23	5.33 - 6.85	~ 5.33 - 6.85	5.33 - 6.85	5.33 - 6.85
	2-Oct-2024	2-Oct-2024	21-Nov-2024	2-Dec-2024
Cobalt	4.43	5.06	0.74	4.5
Nickel	14.9	11.5	12.2	12.1
Selenium	5.3	3.2	4.2	<1.0
Uranium	27.9	27.6	40.7	30.8
Vanadium	0.5	<0.40	9.55	4.72

Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

2011 MECP Table 1 SCS		
Parameter	Units	Conc.
Cobalt	ug/L	3.8
Nickel	ug/L	14
Selenium	ug/L	5
Uranium	ug/L	8.9
Vanadium	ug/L	3.9

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

BOLD Concentration exceeds Table 1 SCS

~ indicates field duplicate sample

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- TOPSOIL
- SILTY SAND
- FILL
- SAND
- SILTY CLAY TILL

- GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024
- GROUNDWATER SAMPLE EXCEEDS TABLE 1 SCS FOR METALS AND ORPs
- GROUNDWATER SAMPLE MEETS TABLE1 SCS FOR METALS AND ORPs

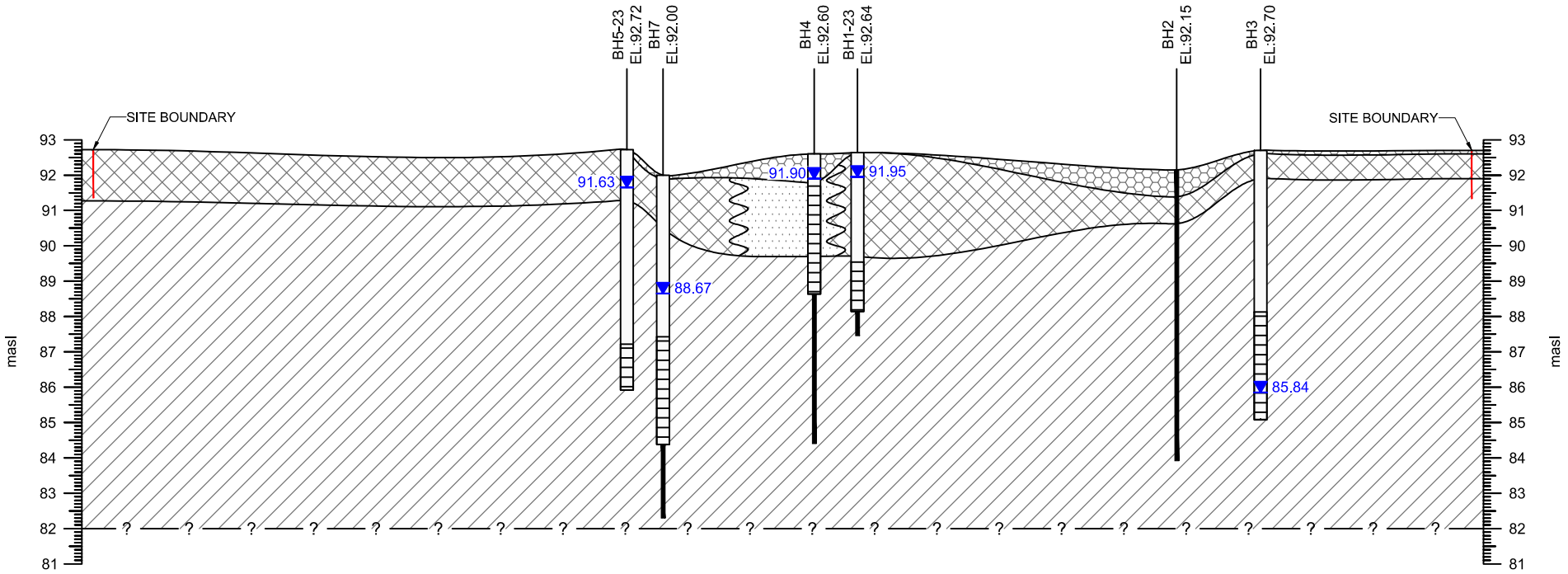
TITLE AND LOCATION:
CROSS SECTION A-A'
GROUNDWATER ANALYTICAL RESULTS - METALS, HYDRIDE-FORMING METALS AND OTHER REGULATED PARAMETERS (Cr(VI), CN-, Hg)
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN.:
GTR-24000672-C0	MS
SCALE:	CK:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	19E

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

B
SOUTHWEST

B'
NORTHEAST



VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada

www.exp.com

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

LEGEND:

- TOPSOIL
- FILL
- SAND
- SILTY CLAY TILL

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

TITLE AND LOCATION:

CROSS SECTION B-B'

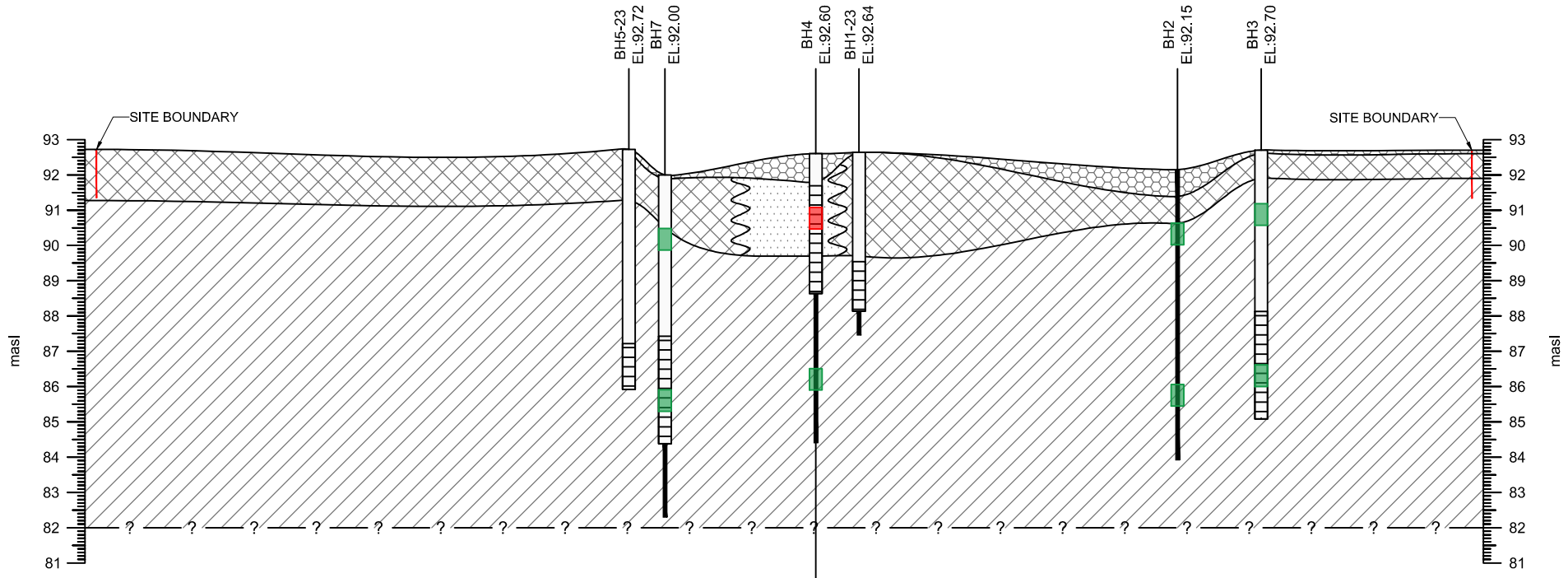
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.: GTR-24000672-C0	DWN.: MS
SCALE: AS NOTED	CK: AC
DATE: DECEMBER 2024	FIG. NO.: 20

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

B
SOUTHWEST

B'
NORTHEAST



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

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

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
PHC F2 (C10-C16)	ug/g	10

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

BOLD Concentration exceeds Table 1 SCS

~ indicates field duplicate sample

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:

- TOPSOIL
- FILL
- SAND
- SILTY CLAY TILL
- SOIL SAMPLE EXCEEDS TABLE 1 SCS FOR PHCs
- SOIL SAMPLE MEETS TABLE1 SCS FOR PHCs

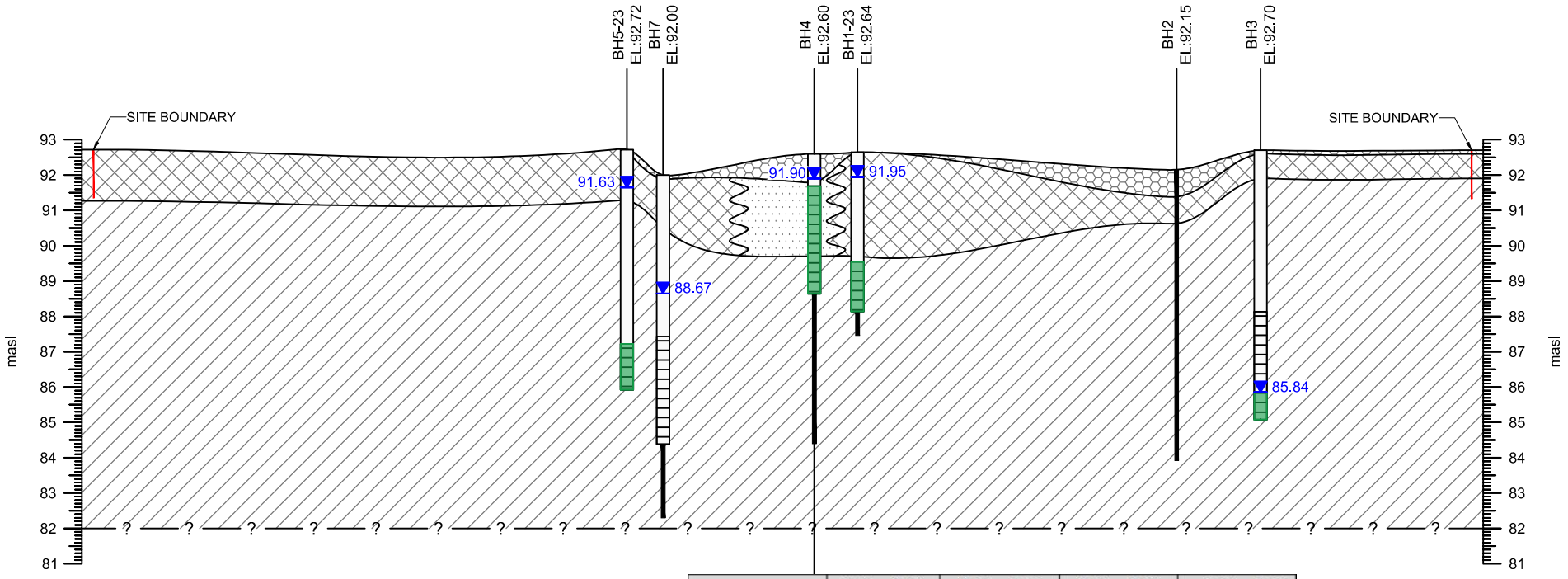
TITLE AND LOCATION:
CROSS SECTION B-B'
SOIL ANALYTICAL RESULTS - PETROLEUM HYDROCARBONS (PHCs) INCLUDING BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN.:
GTR-24000672-C0	MS
SCALE:	CK:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	20A

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

B
SOUTHWEST

B'
NORTHEAST



BH4	0.91 - 3.96	0.91 - 3.96	0.91 - 3.96	~ 0.91 - 3.97
	2-Oct-24	21-Nov-24	2-Dec-24	2-Dec-24
Ethylbenzene	**0.81**	<0.10	<0.10	<0.10

Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
Ethylbenzene	ug/L	0.5

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:
- TOPSOIL
- FILL
- SAND
- SILTY CLAY TILL
- GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024
- GROUNDWATER SAMPLE MEETS TABLE1 SCS FOR PHCs

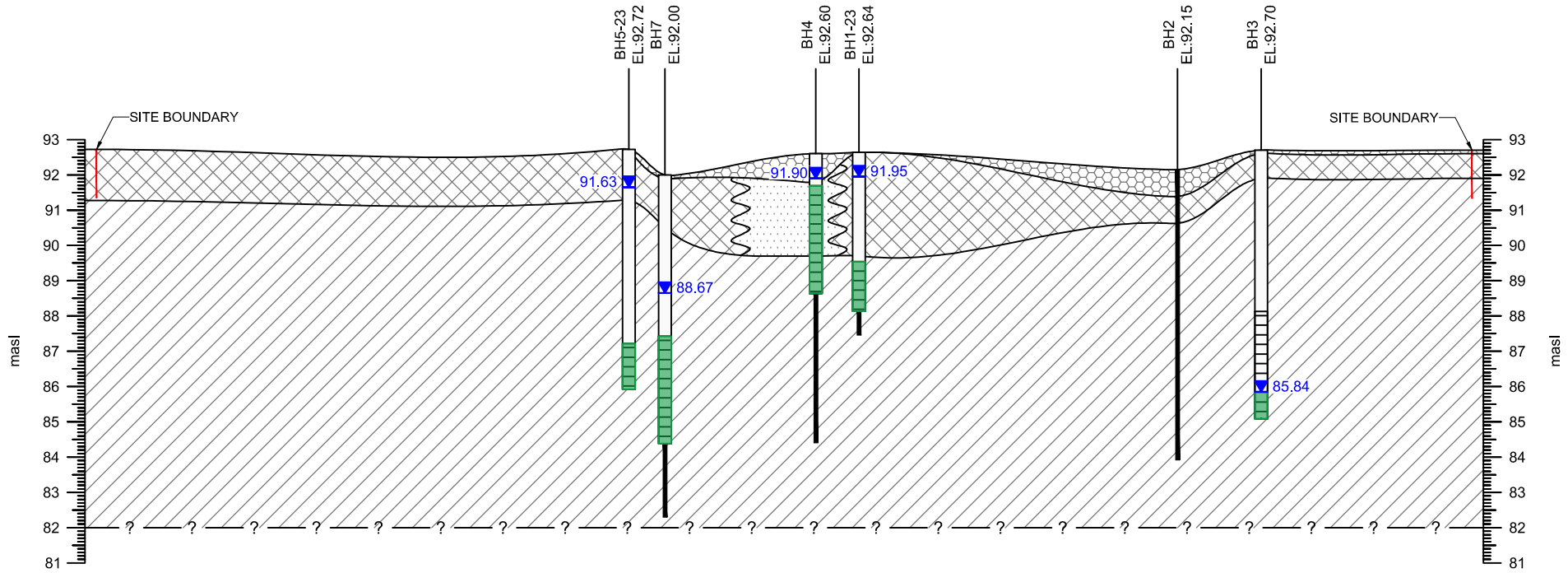
TITLE AND LOCATION:
CROSS SECTION B-B'
GROUNDWATER ANALYTICAL RESULTS - PETROLEUM HYDROCARBONS (PHCs) INCLUDING BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN.:
GTR-24000672-C0	MS
SCALE:	CK:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	20B

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

B
SOUTHWEST

B'
NORTHEAST



Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

2011 MECP Table 1 SCS		
Parameter	Units	Conc.
Ethylbenzene	ug/L	0.5

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:
- TOPSOIL
- FILL
- SAND
- SILTY CLAY TILL
- GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024
- GROUNDWATER SAMPLE MEETS TABLE1 SCS FOR VOCs

TITLE AND LOCATION:

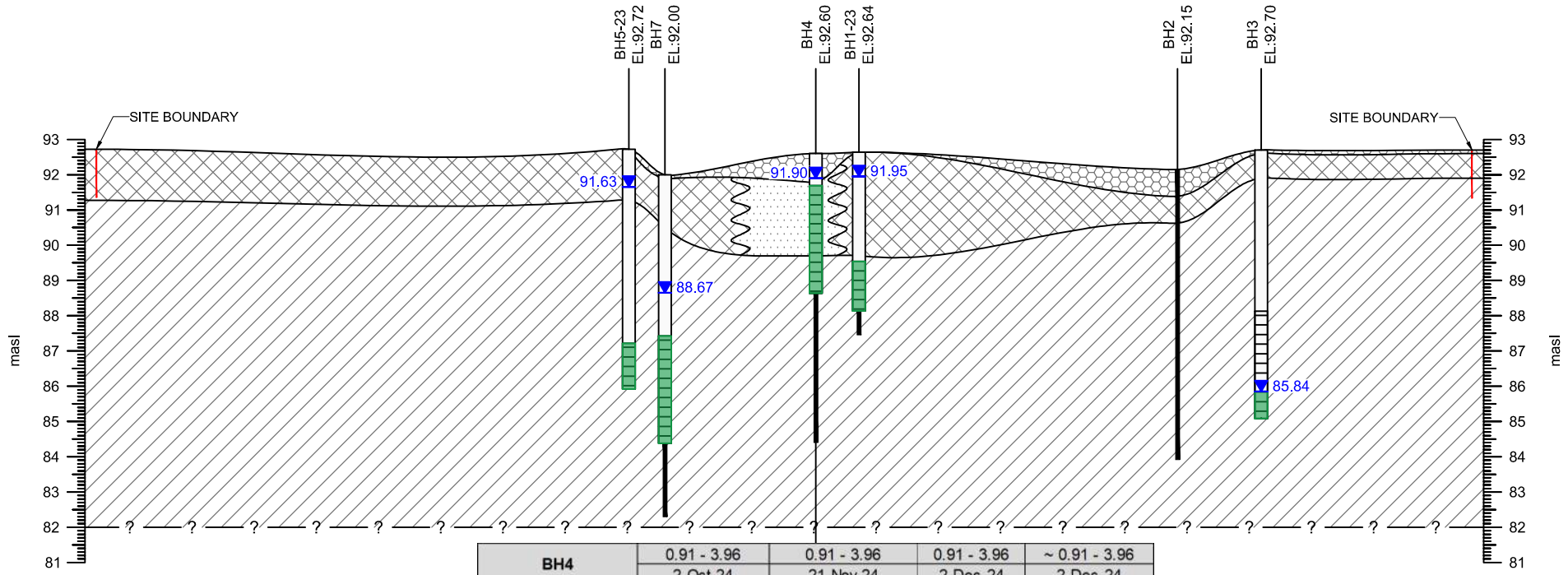
CROSS SECTION B-B'
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS (VOCs)
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN.:
GTR-24000672-C0	MS
SCALE:	CK:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	20C

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

B
SOUTHWEST

B'
NORTHEAST



BH4	0.91 - 3.96	0.91 - 3.96	0.91 - 3.96	~ 0.91 - 3.96
	2-Oct-24	21-Nov-24	2-Dec-24	2-Dec-24
Anthracene	**0.11**	<0.10	<0.10	<0.10
Chrysene	**0.11**	<0.10	<0.10	<0.10
Phenanthrene	**0.22**	<0.10	<0.10	<0.10
Pyrene	**0.22**	<0.20	<0.20	<0.20

Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

2011 MECP Table 1 SCS		
Parameter	Units	Conc.
Anthracene	ug/L	0.1
Chrysene	ug/L	0.1
Phenanthrene	ug/L	0.1
Pyrene	ug/L	0.2

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

~ indicates field duplicate sample

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:
- TOPSOIL
- FILL
- SAND
- SILTY CLAY TILL
- GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024
- GROUNDWATER SAMPLE MEETS TABLE1 SCS FOR PAHs

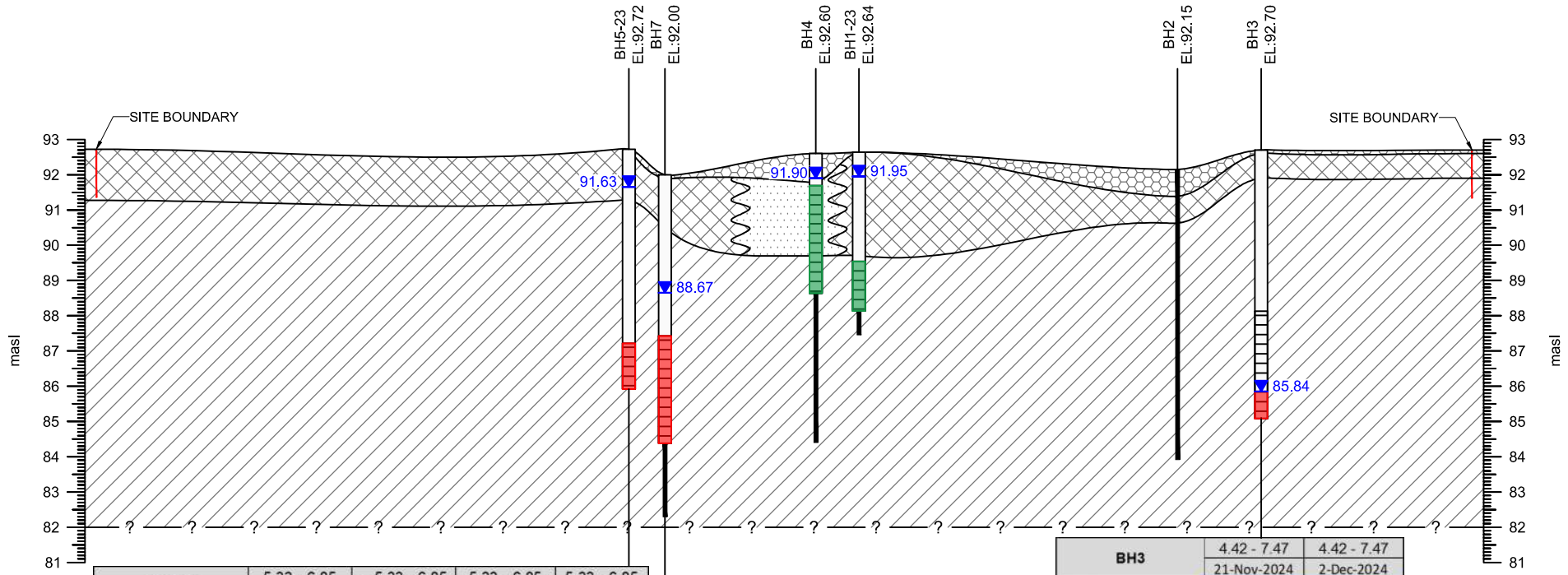
TITLE AND LOCATION:
CROSS SECTION B-B'
GROUNDWATER ANALYTICAL RESULTS - POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN.:
GTR-24000672-C0	MS
SCALE:	CK:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	20D

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

B
SOUTHWEST

B'
NORTHEAST



BH5-23	5.33 - 6.85	~ 5.33 - 6.85	5.33 - 6.85	5.33 - 6.85
	2-Oct-2024	2-Oct-2024	21-Nov-2024	2-Dec-2024
Cobalt	**4.43**	**5.06**	0.74	**4.5**
Nickel	**14.9**	11.5	12.2	12.1
Selenium	**5.3**	3.2	4.2	<1.0
Uranium	**27.9**	**27.6**	**40.7**	**30.8**
Vanadium	0.5	<0.40	**9.55**	**4.72**

BH7	4.42 - 7.47	~ 4.42 - 7.47	4.42 - 7.47	~ 4.42 - 7.47
	21-Nov-2024	21-Nov-2024	2-Dec-2024	2-Dec-2024
Uranium	**13.2**	**12.8**	**11.2**	**11.7**

BH3	4.42 - 7.47	4.42 - 7.47
	21-Nov-2024	2-Dec-2024
Uranium	**21.3**	**20.3**

Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
Cobalt	ug/L	3.8
Nickel	ug/L	14
Selenium	ug/L	5
Uranium	ug/L	8.9
Vanadium	ug/L	3.9

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

BOLD Concentration exceeds Table 1 SCS

~ indicates field duplicate sample

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

LEGEND:
- TOPSOIL
- FILL
- SAND
- SILTY CLAY TILL
- GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024
- GROUNDWATER SAMPLE EXCEEDS TABLE 1 SCS FOR METALS AND ORPs
- GROUNDWATER SAMPLE MEETS TABLE1 SCS FOR METALS AND ORPs

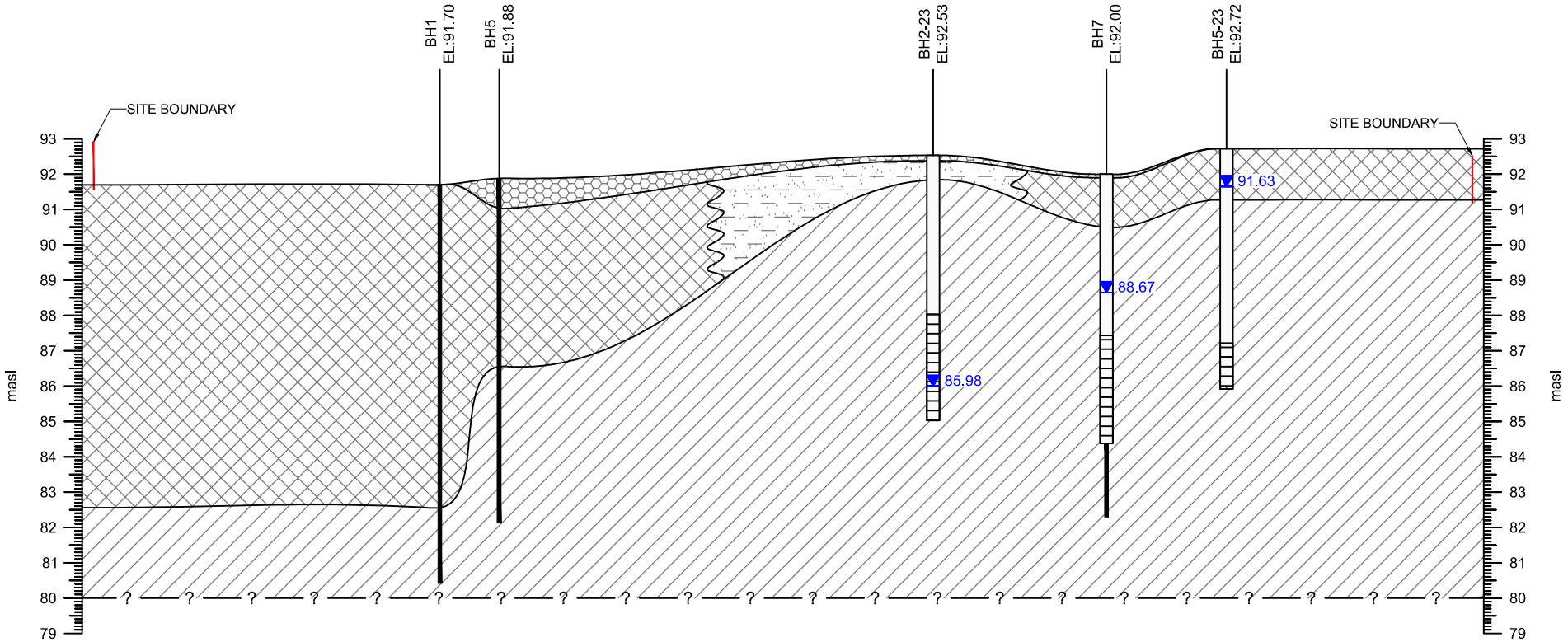
TITLE AND LOCATION:
CROSS SECTION B-B'
GROUNDWATER ANALYTICAL RESULTS - METALS, HYDRIDE-FORMING METALS AND OTHER REGULATED PARAMETERS (Cr(VI), CN-, Hg)
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN.:
GTR-24000672-C0	MS
SCALE:	CK:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	20E

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

C
NORTH

C'
SOUTH



VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada

www.exp.com

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

LEGEND:

- TOPSOIL
- SILTY SAND
- FILL
- SILTY CLAY TILL

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

TITLE AND LOCATION:

CROSS SECTION C-C'

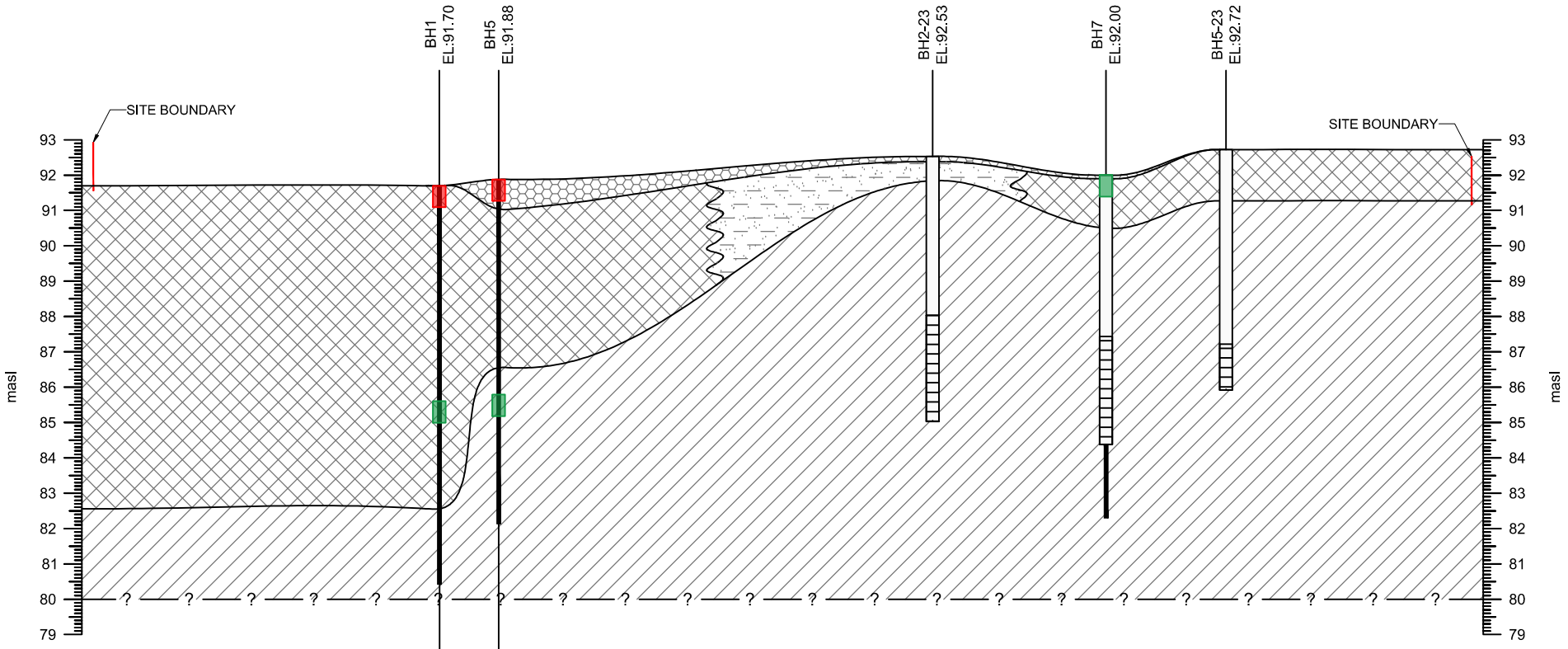
PHASE TWO ESA
1544 AND 1546 FOUR MILE CREEK ROAD
NIAGARA-ON-THE-LAKE, ONTARIO

PROJECT NO.:	DWN.:
GTR-24000672-C0	MS
SCALE:	CK:
AS NOTED	AC
DATE:	FIG. NO.:
DECEMBER 2024	21

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg

C
NORTH

C'
SOUTH



BH1	0.0 - 0.61	6.09 - 6.70
	25-Sep-24	25-Sep-24
pH	**9.18**	7.03

BH5	0.0 - 0.61	6.09 - 6.70
	25-Sep-24	25-Sep-24
pH	**11.4**	6.95

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

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
PHC F2 (C10-C16)	ug/g	10

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

BOLD Concentration exceeds Table 1 SCS

~ indicates field duplicate sample

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada

www.exp.com

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

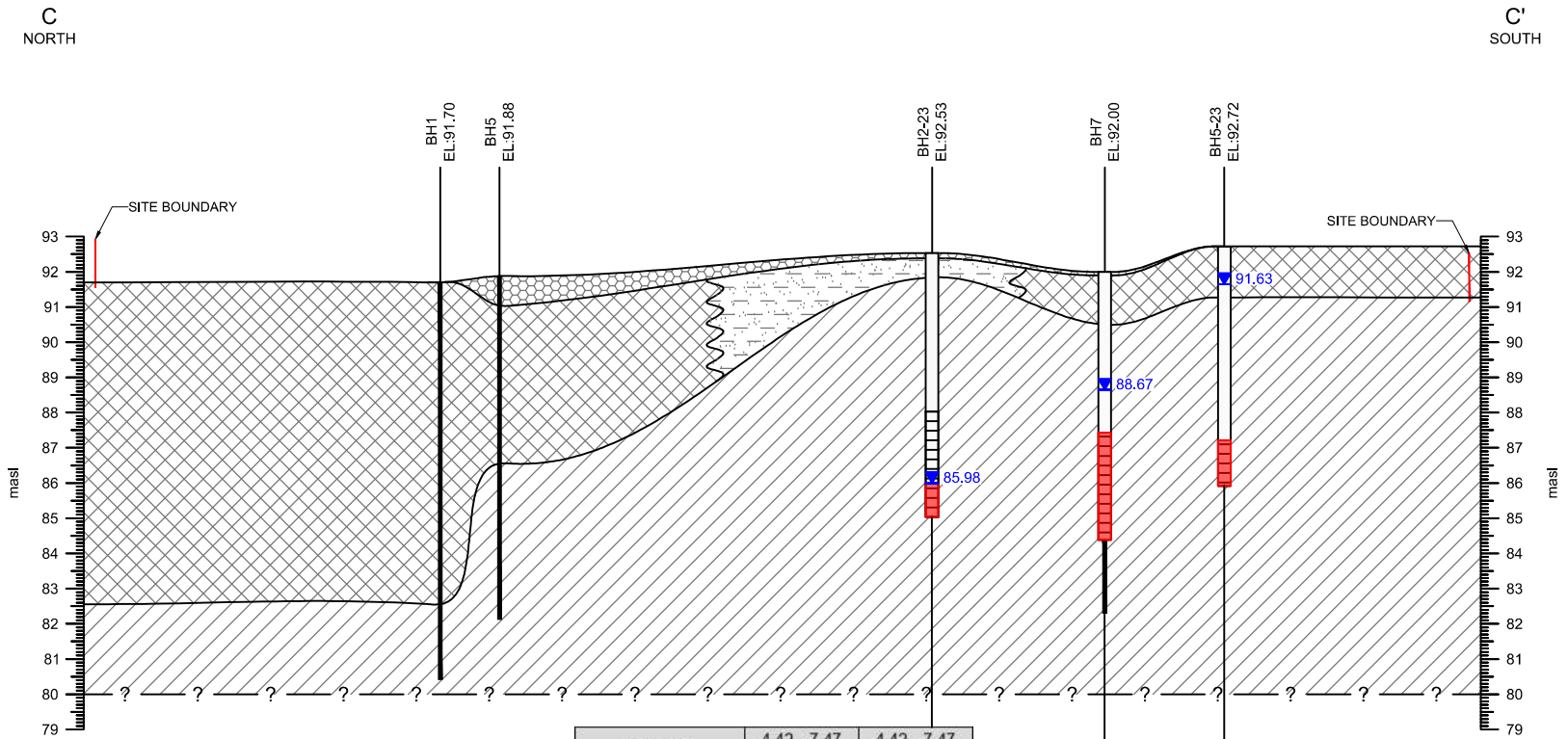
LEGEND:

- TOPSOIL
- SILTY SAND
- FILL
- SILTY CLAY TILL
- SOIL SAMPLE EXCEEDS TABLE 1 SCS FOR METALS AND ORPs
- SOIL SAMPLE MEETS TABLE1 SCS FOR METALS AND ORPs

TITLE AND LOCATION:
CROSS SECTION C-C'
SOIL ANALYTICAL RESULTS - METALS, HYDRIDE-FORMING METALS AND OTHER REGULATED PARAMETERS (B-HWS, Cr(VI), Hg, CN-)
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.:
DECEMBER 2024	21A

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg



BH2-23	4.42 - 7.47	4.42 - 7.47
	2-Oct-2024	21-Nov-2024
Uranium	**13.7**	**13.4**

BH7	4.42 - 7.47	~ 4.42 - 7.47	4.42 - 7.47	~ 4.42 - 7.47
	21-Nov-2024	21-Nov-2024	2-Dec-2024	2-Dec-2024
Uranium	**13.2**	**12.8**	**11.2**	**11.7**

BH5-23	5.33 - 6.85	~ 5.33 - 6.85	5.33 - 6.85	5.33 - 6.85
	2-Oct-2024	2-Oct-2024	21-Nov-2024	2-Dec-2024
Cobalt	**4.43**	**5.06**	0.74	**4.5**
Nickel	**14.9**	11.5	12.2	12.1
Selenium	**5.3**	3.2	4.2	<1.0
Uranium	**27.9**	**27.6**	**40.7**	**30.8**
Vanadium	0.5	<0.40	**9.55**	**4.72**

Sample ID	Well Screen Depth (m bgs)
	Date (dd-mm-yy)
Parameter	Concentration (ug/L)

2011 MECP Table 1 SCS		
Parameter	**Units**	**Conc.**
Cobalt	ug/L	3.8
Nickel	ug/L	14
Selenium	ug/L	5
Uranium	ug/L	8.9
Vanadium	ug/L	3.9

(1) MECP (2011) Table 1: Full Depth Background Site Condition Standards Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

BOLD Concentration exceeds Table 1 SCS

~ indicates field duplicate sample

VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 5 10 15 20 25 m

EXP Services Inc.
t: +1.905.793.9800 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada
www.exp.com

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

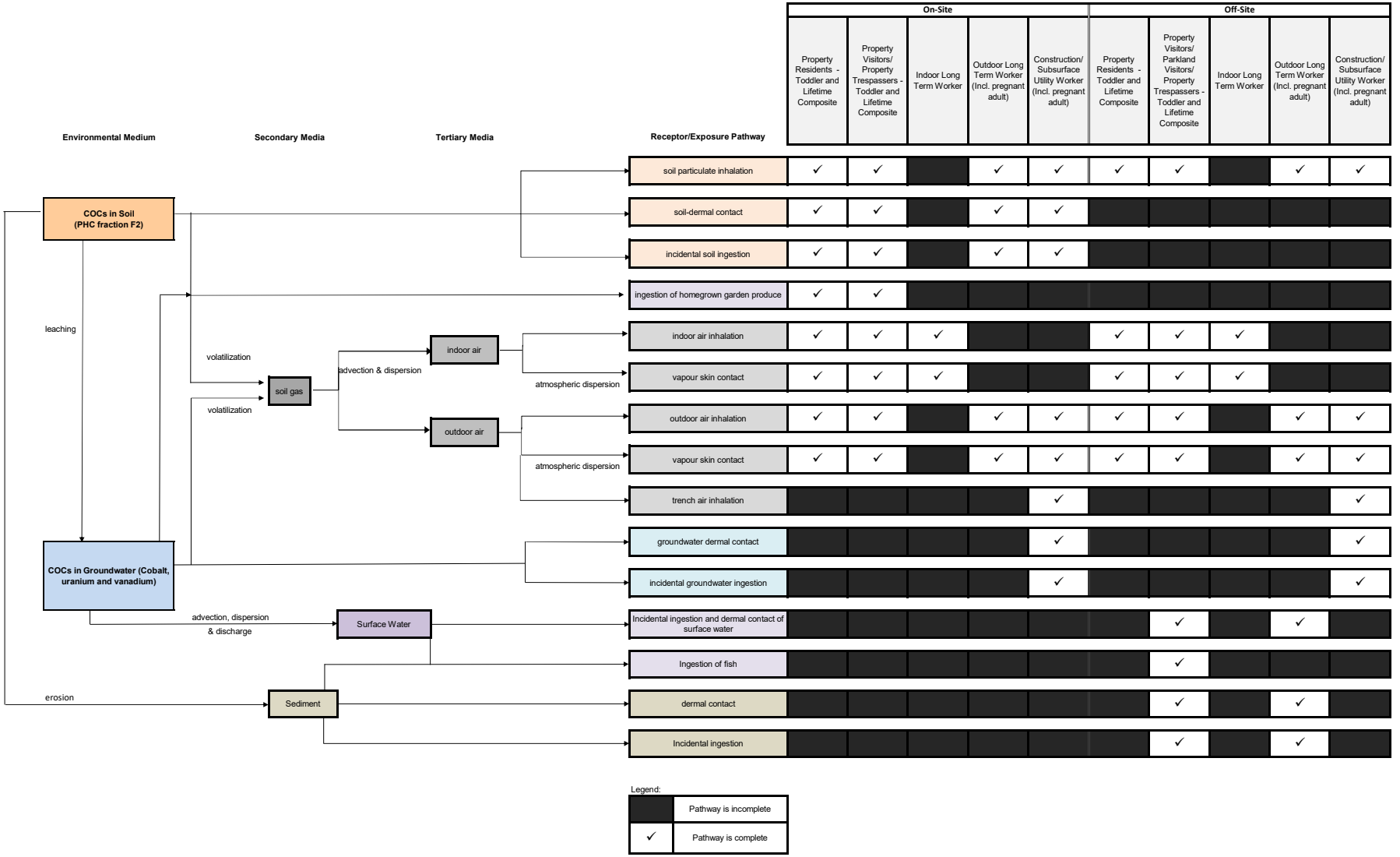
LEGEND:

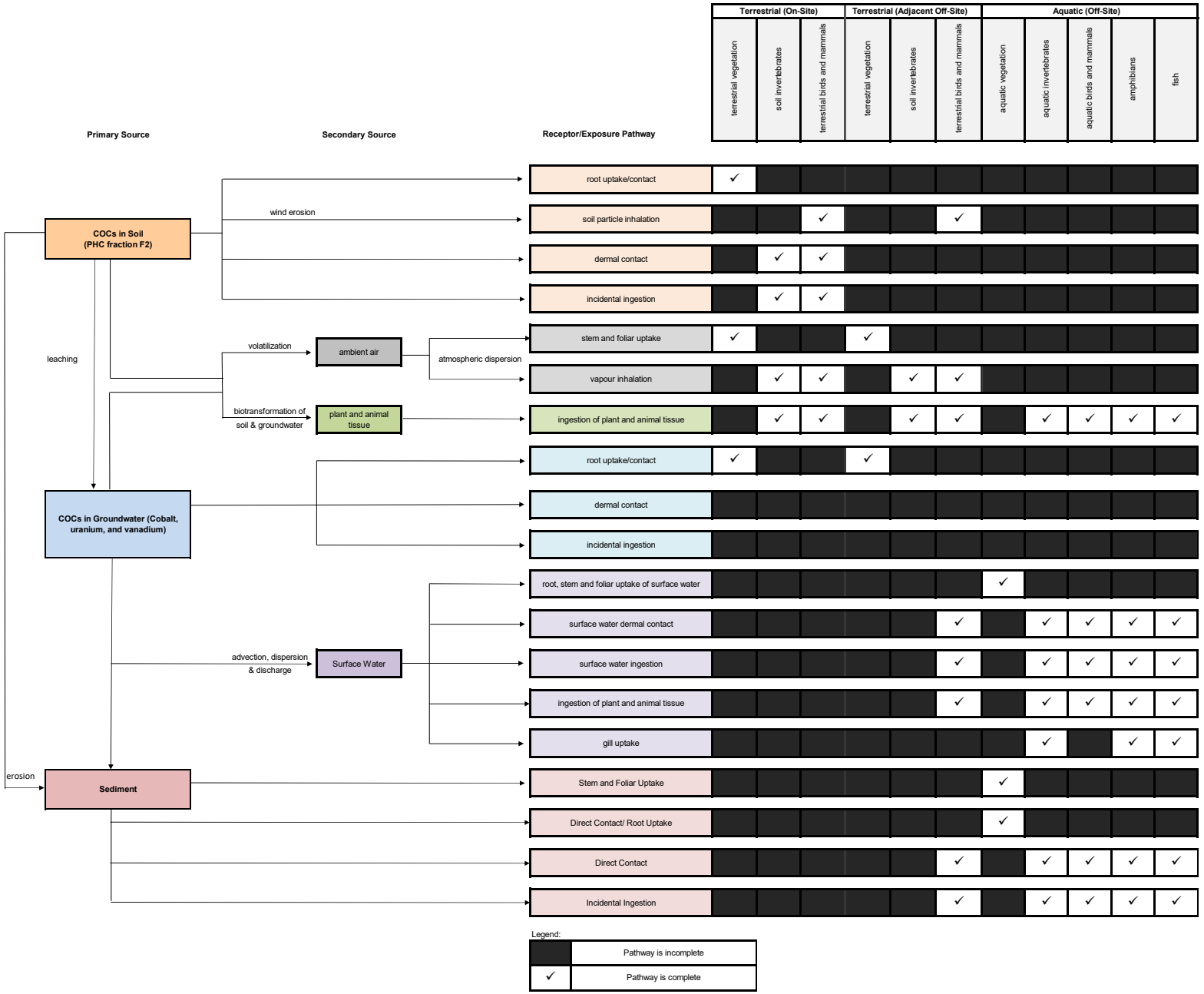
- TOPSOIL
- SILTY SAND
- FILL
- SILTY CLAY TILL
- GROUNDWATER ELEVATION (masl) AS MEASURED ON DECEMBER 02, 2024
- GROUNDWATER SAMPLE EXCEEDS TABLE 1 SCS FOR METALS AND ORPs
- GROUNDWATER SAMPLE MEETS TABLE1 SCS FOR METALS AND ORPs

TITLE AND LOCATION:
CROSS SECTION C-C'
GROUNDWATER ANALYTICAL RESULTS - METALS, HYDRIDE-FORMING METALS AND OTHER REGULATED PARAMETERS (Cr(VI), CN-, Hg)
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.:
DECEMBER 2024	21B

\\exp\data\BRM\GTR-24000672-C0\60 Execution\68 ArcGIS\CAD\GTR-24000672-C0.dwg


Environmental Medium
Secondary Media
Tertiary Media
Receptor/Exposure Pathway
On-Site
Off-Site
Property Residents - Toddler and Lifetime Composite
Property Visitors/ Property Trespassers - Toddler and Lifetime Composite
Indoor Long Term Worker
Outdoor Long Term Worker (Incl. pregnant adult)
Construction/ Subsurface Utility Worker (Incl. pregnant adult)
Property Residents - Toddler and Lifetime Composite
Property Visitors/ Parkland Visitors/ Property Trespassers - Toddler and Lifetime Composite
Indoor Long Term Worker
Outdoor Long Term Worker (Incl. pregnant adult)
Construction/ Subsurface Utility Worker (Incl. pregnant adult)
COCs in Soil (PHC fraction F2)
COCs in Groundwater (Cobalt, uranium and vanadium)
leaching
volatilization
soil gas
volatilization
advection & dispersion
indoor air
outdoor air
atmospheric dispersion
atmospheric dispersion
advection, dispersion & discharge
Surface Water
erosion
Sediment
soil particulate inhalation
soil-dermal contact
incidental soil ingestion
ingestion of homegrown garden produce
indoor air inhalation
vapour skin contact
outdoor air inhalation
vapour skin contact
trench air inhalation
groundwater dermal contact
incidental groundwater ingestion
Incidental ingestion and dermal contact of surface water
Ingestion of fish
dermal contact
Incidental ingestion
Legend:
Pathway is incomplete
Pathway is complete


Terrestrial (On-Site)
Terrestrial (Adjacent Off-Site)
Aquatic (Off-Site)
terrestrial vegetation
soil invertebrates
terrestrial birds and mammals
terrestrial vegetation
soil invertebrates
terrestrial birds and mammals
aquatic vegetation
aquatic invertebrates
aquatic birds and mammals
amphibians
fish
Primary Source
Secondary Source
Receptor/Exposure Pathway
COCs in Soil (PHC fraction F2)
wind erosion
leaching
volatilization
ambient air
atmospheric dispersion
biotransformation of soil & groundwater
plant and animal tissue
COCs in Groundwater (Cobalt, uranium, and vanadium)
advection, dispersion & discharge
Surface Water
erosion
Sediment
root uptake/contact
soil particle inhalation
dermal contact
incidental ingestion
stem and foliar uptake
vapour inhalation
ingestion of plant and animal tissue
root uptake/contact
dermal contact
incidental ingestion
root, stem and foliar uptake of surface water
surface water dermal contact
surface water ingestion
ingestion of plant and animal tissue
gill uptake
Stem and Foliar Uptake
Direct Contact/ Root Uptake
Direct Contact
Incidental Ingestion
Legend:
Pathway is incomplete
Pathway is complete

Tables

Table 1: SITE ENVIRONMENTAL SETTING DATA

1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario
December 2024

NATIVE SOIL

Type:	silty clay to clayey silt till
Hydraulic Conductivity $> 10^{-3}$ cm/s:	
$<10^{-3}$ to $>10^{-6}$ cm/s:	1 x 10-7
$< 10^{-6}$ 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

1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario
December 2024

Q=kia v=ki/n 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 4A - Summary of Soil Samples Submitted for Chemical Analysis

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

December 2024

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	Assess fill of unknown quality	PHCs, VOCs, PAHs
BH1-SS7	6.09 - 6.70	Assess fill of unknown quality	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	Horizontally delineate historical PHC exceedances at BH1-23	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	Assess location of vent/fill pipes	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	Assess former USTs, horizontally delineate historical PHC exceedances at BH1-23, assess marine and equipment repair shop	PHCs, VOCs
BH5-SS1	0.0 - 0.61	Assess fill of unknown quality	Metals, ORPs
BH5-SS2	0.76 - 1.37	Assess fill of unknown quality	PHCs, VOCs, PAHs, PCBs
BH5-SS7	6.09 - 6.70	Assess fill of unknown quality	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	Assess repair shop and horizontally delineate historical PHC exceedances at BH1-23	PHCs, VOCs
QA/QC Samples:			
BH7-SS1-0	0.0 - 0.61	Duplicate of BH7-SS1	Metals, ORPs
BH7-SS2-0	0.76 - 1.37	Dup of BH7-SS2	PAHs, OCPs
BH7-SS3-0	1.52 - 2.13	Dup 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 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario
December 2024

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
QA/QC Samples:			
BH5-23-0	2-Oct-24	Duplicate of BH5-23	PHCs, VOCs, PAHs, Metals, ORPs
TRIP BLANK	2-Oct-24	QA/QC	VOCs
TRIP BLANK	21-Nov-24	QA/QC	VOCs
BH7-0	21-Nov-24	Duplicate of BH7	PHCs, VOCs, PAHs, Metals, ORPs
	2-Dec-24		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

December 2024

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 1 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)	**229**	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 shown are for a Residential/Parkland/Institutional property use and coarse and/or fine textured soil.

Exceedances of Table 1 Standards are shown in bold.

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

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

December 2024

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 1 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 shown are for a Residential/Parkland/Institutional property use and coarse and/or fine textured soil.

Exceedances of Table 1 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

December 2024

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 1 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 shown are for a Residential/Parkland/Institutional property use and coarse and/or fine textured soil.

Exceedances of Table 1 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

December 2024

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 1 Soil Standards**
Metals			
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
Other Regulated Parameters			
Boron (hot water soluble)	0.1	0.89	NA
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	**0.882**	0.57
Sodium Adsorption Ratio (unitless)	NV	0.825	2.4
pH (pH Units)	NV	**11.4**	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 shown are for a Residential/Parkland/Institutional property use and coarse and/or fine textured soil.

Exceedances of Table 1 Standards are shown in bold.

Table 5E: MAXIMUM SOIL CONCENTRATION DATA - Polychlorinated Biphenyls

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

December 2024

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 1 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 shown are for a Residential/Parkland/Institutional property use and coarse-textured soils.

Exceedances of Table 1 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

December 2024

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 1 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'-DDE	0.005	<0.005	NV
pp'-DDE	0.005	<0.005	NV
DDE	0.007	<0.007	0.05
op'-DDD	0.005	<0.005	NV
pp'-DDD	0.005	<0.005	NV
DDD	0.007	<0.007	0.05
op'-DDT	0.005	<0.005	NV
pp'-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	0.01
Hexachlorobutadiene	0.01	<0.01	0.01

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 shown are for a Residential/Parkland/Institutional property use and coarse-textured soils.

Exceedances of Table 1 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

December 2024

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 1 Ground Water Standards**
Benzene	0.2	<0.20	0.5
Toluene	0.2	<0.20	0.8
Ethylbenzene	0.1	<0.10	0.5
m-Xylene + p-Xylene	0.2	<0.20	NV
o-Xylene	0.1	<0.10	NV
Xylenes (Total)	0.2	<0.20	72
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 Table 1 All Types of Property Use and all textured soils.

Exceedances of Table 1 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
December 2024

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 1 Ground Water Standards**
Acetone	1.0	<1.0	2700
Benzene	0.20	<0.20	0.5
Bromodichloromethane	0.20	<0.20	2
Bromoform	0.10	<0.10	5
Bromomethane	0.20	<0.20	0.89
Carbon Tetrachloride	0.20	<0.20	0.2
Chlorobenzene	0.10	<0.10	0.5
Chloroform	0.20	<0.20	2
Dibromochloromethane	0.10	<0.10	2
1,2-Dichlorobenzene	0.10	<0.10	0.5
1,3-Dichlorobenzene	0.10	<0.10	0.5
1,4-Dichlorobenzene	0.10	<0.10	0.5
Dichlorodifluoromethane	0.40	<0.40	590
1,1-Dichloroethane	0.30	<0.30	0.5
1,2-Dichloroethane	0.20	<0.20	0.5
1,1-Dichloroethylene	0.30	<0.30	0.5
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	0.5
cis- & trans-1,3-Dichloropropene	0.30	<0.30	0.5
Ethylbenzene	0.10	**0.81**	0.5
Ethylene Dibromide (1,2-Dibromoethane)	0.10	<0.10	0.2
Hexane (n)	0.20	<0.20	5
Methylene chloride (Dichloromethane)	0.30	<0.30	5
Methyl ethyl ketone (2-Butanone)	1.0	<1.0	400
Methyl Isobutyl Ketone	1.0	<1.0	640
Methyl t-butyl ether (MTBE)	0.20	<0.20	15
Styrene	0.10	<0.10	0.5
1,1,1,2-Tetrachloroethane	0.10	<0.10	1.1
1,1,2,2-Tetrachloroethane	0.10	<0.10	0.5
Tetrachloroethylene	0.20	<0.20	0.5
Toluene	0.20	<0.20	0.8
1,1,1-Trichloroethane	0.30	<0.30	0.5
1,1,2-Trichloroethane	0.20	<0.20	0.5
Trichloroethylene	0.20	<0.20	0.5
Trichlorofluoromethane	0.40	<0.40	150
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	72

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 Table 1 All Types of Property Use and all textured soils.

Exceedances of Table 1 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

December 2024

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 1 Ground Water Standards**
Acenaphthene	0.20	0.22	4.1
Acenaphthylene	0.20	<0.20	1
Anthracene	0.10	<0.10	0.1
Benzo(a)anthracene	0.20	<0.20	0.2
Benzo(a)pyrene	0.01	<0.01	0.01
Benzo(b/j)fluoranthene	0.10	<0.10	0.1
Benzo(ghi)perylene	0.20	<0.20	0.2
Benzo(k)fluoranthene	0.10	<0.10	0.1
Chrysene	0.10	<0.10	0.1
Dibenz(a,h)anthracene	0.20	<0.20	0.2
Fluoranthene	0.20	0.33	0.4
Fluorene	0.20	<0.20	120
Indeno(1,2,3-cd)pyrene	0.20	<0.20	0.2
Naphthalene	0.20	0.44	7
Phenanthrene	0.10	<0.10	0.1
Pyrene	0.20	0.2	0.2
1&2-Methylnaphthalene	0.20	0.22	2

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 Table 1 All Types of Property Use and all textured soils.

Exceedances of Table 1 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

December 2024

Contaminant Name	Minimum RDL*	Maximum Measured Concentration	Ontario Regulation 153/04 Table 1 Ground Water Standards**
Metals			
Antimony	1.0	<1.0	1.5
Arsenic	1.0	11.6	13
Barium	2.0	159	610
Beryllium	0.50	<0.50	0.5
Boron (Total)	10.0	506	1700
Cadmium	0.20	<0.20	0.5
Chromium (total)	2.0	<2.0	11
Cobalt	0.50	**5.06**	3.8
Copper	1.0	3.6	5
Lead	0.50	0.61	1.9
Molybdenum	0.50	15.7	23
Nickel	1.0	12.2	14
Selenium	1.0	4.2	5
Silver	0.20	<0.20	0.3
Thallium	0.30	<0.30	0.5
Uranium	0.50	**40.7**	8.9
Vanadium	0.40	**9.55**	3.9
Zinc	5.0	5.1	160
Other Regulated Parameters			
Chromium VI	2.000	<2.000	25
Free Cyanide	2	<2	5
Mercury	0.02	<0.02	0.1
Sodium	50	355000	490000
Chloride	100 (122)	328000	790000

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 Table 1 All Types of Property Use and all textured soils.

Exceedances of Table 1 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

Location ID	MECP (2011) Table 1: Full Depth Background SCS 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	<0.02
Toluene	0.2	0.02	<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	0.02	<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	0.04	<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	0.02	<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	0.04	<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	<5
PHC F1 (C6-C10) - BTEX	25	5	<5	<5	<5	<5	<5	13	<5	<5	<5	<5	<5
PHC F2 (C10-C16)	10	10 (<7)	<7	<10	<10	<7	<7	**229**	<10	<7	<10	<10	<10
PHC F3 (C16-C34)	240	50	<50	<50	<50	<50	<50	177	<50	79	<50	<50	<50
PHC F4 (C34-C50)	120	50	<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

Bold Concentration exceeds MECP (2011) Table 1 SCS.

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

SOIL ANALYTICAL RESULTS:

Table 7 - Volatile Organic Compounds in Soil

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

Location ID			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	MECP (2011) Table 1: Full Depth		6182810	6177137	6177143	6182502	6182511	6177146	6177147	6182819	6177168	6177169	6177170
Sampling Date	Background SCS		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)	RPIICC Land Use	Reporting Detection Limit (RDL)*	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	(coarse and/or fine textured soil)		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
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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<0.03
cis- & trans-1,3-Dichloropropene	0.05	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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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

Bold Concentration exceeds MECP (2011) Table 1 SCS.

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

SOIL ANALYTICAL RESULTS:

Table 8 - Polycyclic Aromatic Hydrocarbons in Soil

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

Location ID	MECP (2011) Table 1: Full Depth Background SCS 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	0.16	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	0.56	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.12	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

Bold Concentration exceeds MECP (2011) Table 1 SCS.

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

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

Location ID	MECP (2011) Table 1: Full Depth Background SCS RPIICC Land Use (coarse and/or fine textured soil)	Reporting Detection Limit (RDL)*	BH1		BH2	BH3	BH4	BH5		BH7	
Field Sample ID			BH1 - SS1	BH1 - SS7	BH2-SS2	BH3 - SS1	BH4-SS2	BH5 - SS1	BH5 - SS7	BH7-SS1	BH7-SS10
Lab ID			6182808	6182817	6177134	6182498	6177144	6182818	6182820	6177150	6177151
Sampling Date			25-Sep-24	25-Sep-24	24-Sep-24	26-Sep-24	24-Sep-24	25-Sep-24	25-Sep-24	24-Sep-24	24-Sep-24
Soil Sample Depth (mbgs)			0.0 - 0.61	6.09 - 6.70	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
Consultant			EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP	EXP
Laboratory			AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis Number			24H202348	24H202348	24H201833	24H202434	24H201833	24H202348	24H202348	24H201833	24H201833
Metals											
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	21	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
Other Regulated Parameters											
Boron (hot water soluble)	NA	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)	0.57	0.005	0.34	-	0.185	0.178	0.257	**0.882**	0.256	0.328	0.283
Sodium Adsorption Ratio (unitless)	2.4	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	**9.18**	7.03	7.46	6.87	7.38	**11.4**	6.95	7.24	7.14

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

Bold Concentration exceeds MECP (2011) Table 1 SCS.

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

SOIL ANALYTICAL RESULTS:

Table 10 - Polychlorinated Biphenyls in Soil

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

Location ID	MECP (2011) Table 1: Full Depth Background SCS RPIICC Land Use (coarse and/or fine textured soil)	Reporting Detection Limit (RDL)*	BH1		BH5
Field Sample ID			BH1 - SS1	BH1 - SS1-0	BH5 - SS2
Lab ID			6182808	6182809	6182821
Sampling Date			25-Sep-2024	25-Sep-2024	25-Sep-2024
Soil Sample Depth (mbgs)			0.0 - 0.61	0.0 - 0.61	0.76 - 1.37
Consultant			EXP	EXP	EXP
Laboratory			AGAT	AGAT	AGAT
Certificate of Analysis Number			24H202348	24H202348	24H202348
Total Polychlorinated Biphenyls	0.3	0.01	<0.1	<0.1	<0.1

All soil concentrations reported in µg/g.
* Maximum RDL below MECP (2011) SCS
** Approximate depth below basement floor slab
'<' = Parameter below detection limit, as indicated
'NV'= No value
NA= Not applicable or not analyzed
Bold Concentration exceeds MECP (2011) Table 1 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

Location ID	MECP (2011) Table 1: Full Depth Background SCS 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	0.01	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.01	0.01	<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
Bold Concentration exceeds MECP (2011) Table 1 SCS.
Non-detect but detection limit exceeds the MECP (2011) SCS

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

Location ID	MECP (2011) Table 1: Full Depth Background SCS All Types of 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
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
Benzene	0.5	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	0.8	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	0.5	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)	72	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

** Approximate depth below basement floor slab

'<' = Parameter below detection limit, as indicated

'NV'= No value

NA= Not applicable or not analyzed

Bold Concentration exceeds MECP (2011) Table 1 SCS.

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

GROUNDWATER ANALYTICAL RESULTS:

Table 13 - Volatile Organic Compounds in Groundwater

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

Location ID	MECP (2011) Table 1: Full Depth Background SCS All Types of Land Use (groundwater)	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	2700	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Bromomethane	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	2	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	0.5	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	0.5	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	0.5	0.10	<0.10	<0.10	<0.30	<0.10	<0.30	<0.30	<0.10	<0.10	<0.10	<0.10
Dichlorodifluoromethane	590	0.40	<0.40	<0.40	<0.10	<0.40	<0.10	<0.10	<0.40	<0.40	<0.40	<0.40
1,1-Dichloroethane	0.5	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	0.5	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	0.5	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	0.5	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	0.5	0.30	<0.30	<0.30	<0.20	<0.30	<0.20	<0.20	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	0.5	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)	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Hexane (n)	5	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)	5	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)	400	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	640	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)	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Styrene	0.5	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	1.1	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	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	0.8	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	0.5	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	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	150	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)	72	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

** Approximate depth below basement floor slab

'<' = Parameter below detection limit, as indicated

NA= Not applicable or not analyzed

'NV'= No value

Bold Concentration exceeds MECP (2011) Table 1 SCS.

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

GROUNDWATER ANALYTICAL RESULTS:

Table 14 - Polycyclic Aromatic Hydrocarbons in Groundwater

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

Location ID	MECP (2011) Table 1: Full Depth Background SCS All Types of Land Use (groundwater)	Reporting Detection Limit (RDL)*	BH1-23	BH2-23	BH3	BH4	BH4	BH4	BH4-0	BH7	BH7-0	BH5-23	BH5-23-0
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	4.1	0.20	0.22	<0.20	<0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	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
Anthracene	0.1	0.10	<0.10	<0.10	<0.10	**0.11**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)anthracene	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)pyrene	0.01	0.01	<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	0.1	0.10	<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	<0.20
Benzo(k)fluoranthene	0.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chrysene	0.1	0.10	<0.10	<0.10	<0.10	**0.11**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dibenz(a,h)anthracene	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluoranthene	0.4	0.20	<0.20	<0.20	<0.20	0.33	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	120	0.20	<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	<0.20
Naphthalene	7	0.20	<0.20	<0.20	<0.20	0.440	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	0.1	0.10	<0.10	<0.10	<0.10	**0.220**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Pyrene	0.2	0.20	<0.20	<0.20	<0.20	**0.22**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1&2-Methylnaphthalene	2	0.20	<0.20	<0.20	<0.20	0.22	<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

** Approximate depth below basement floor slab

'<' = Parameter below detection limit, as indicated

NA= Not applicable or not analyzed

'NV'= No value

Bold Concentration exceeds MECP (2011) Table 1 SCS.

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

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

Location ID	MECP (2011) Table 1: Full Depth Background SCS All Types of 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
Metals																
Antimony	1.5	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	13	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	610	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	0.5	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)	1700	10.0	65	431	476	488	506	119	498	448	471	435	256	257	313	291
Cadmium	0.5	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)	11	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	3.8	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	5	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	1.9	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	23	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	14	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	5	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	0.3	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	0.5	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	8.9	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	3.9	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	160	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
Other Regulated Parameters																
Chromium VI	25	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	5	2	<2	<2	-	-	<2	<2	-	-	<2	<2	<2	<2	-	<2
Mercury	0.1	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	490000	50	14100	230000	-	-	309000	29000	-	-	256000	254000	327000	339000	-	355000
Chloride	790000	100 (122)	30000	169000	-	-	127000	16800	-	-	150000	148000	315000	319000	-	328000

All groundwater concentrations reported in µg/L.

* Maximum RDL below MECP (2011) SCS

** Approximate depth below basement floor slab

'<' = Parameter below detection limit, as indicated

'NV'= No value

NA= Not applicable or not analyzed

Bold Concentration exceeds MECP (2011) Table 1 SCS.

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

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.

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 1026, 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

TOWN OF NIAGARA-ON-THE-LAKE

REGIONAL MUNICIPALITY OF NIAGARA

SCALE & NOTES
Scale 1:300
5 0 5 10 15 20 METRES

BARICH GRENKIE SURVEYING LTD.
A DIVISION OF GEOMAPLE

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 GEOID 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) (2010.0).

HORIZONTAL DATUM NOTE

PROJECTION: UNIVERSAL TRANSVERSE MERCATOR
(UTM, ZONE 17, CM 81°00'W)

DATUM: NAD83 (CSRS)(2010.0)

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 ZONE 17, NAD83 (CSRS)(2010.0).
COORDINATES TO URBAN ACCURACY PER SEC 14(2) OF O.REG. 216/10

OBSERVED REFERENCE POINTS		
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.

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

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
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. NOUWENS, 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 SHOW REMOVED BERM & CURBS ON EAST SIDE OF FOUR MILE CREEK ROAD & NEW DRIPLINE 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 1E5 (905) 662-6767
A DIVISION OF GEOMAPLE

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

Z:\PROJECTS\Jobs 2023\23-3200 - 1544 & 1546 Four Mile Creek Rd, Virgil\Surveying\23-3200 TOPO_UPDATED_FEB18_2025.dwg

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. She is currently completing the required studies for several City's contracts for 2023 and 2024 Capital Years in accordance with the Planning Requirements of O. Reg. 406/19.

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.

Appendix D – Sampling and Analysis Plan

Memorandum

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.

…/2

- 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
BH1	**Metals and Inorganics/PAHs/PCBs** - 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	**No well installation**
	PHCs/VOCs –0 -1.5m Submit deeper delineation sample from about 4-5m on HOLD			
BH2	**Metals and Inorganics/PAHs/OC pesticides** - 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	**No well installation**
	PHCs/VOCs – 1.5-2.0 m **PHCs/VOCs** – worst case or at water table (expected at 6m)	horizontally delineate historical PHC exceedances at BH1-23		
BH3	**Metals and Inorganics/PAHs/OC pesticides** - 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)
	PHCs/VOCs – 1.5-2.0 m **PHCs/VOCs** – worst case or at water table (expected at 6m) Submit deeper delineation sample	Assess location of vent/fill pipes		

Borehole ID	Approximate Depth of Soil Sample*	Sampling Rationale	Parameters	Well install
	from about 8m or deeper on HOLD			
BH4	**Metals and Inorganics/PAHs/OC pesticides** - worse case (0-1.5m)	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)
	PHCs/VOCs – 1.5-2.0m **PHCs/VOCs** – worst case or at water table (expected at 6m) Submit deeper delineation sample from about 8m or deeper on HOLD			
BH5	**Metals and Inorganics/PAHs/PCBs** - 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	**No well installation**
	PHCs/VOCs –0 -1.5m Submit deeper delineation sample from about 4-5m on HOLD			
BH7	**Metals and Inorganics/PAHs/OC pesticides** - worse case (0-1.5m)	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)
	PHCs/VOCs – 1.5-2.0m **PHCs/VOCs** – worst case or at water table (expected at 6m) Submit deeper delineation sample from about 8m or deeper on HOLD	horizontally delineate historical PHC exceedances at BH1-23, assess marine and equipment repair shop		

*Guidance on sampling depths:

- 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 as 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 10ºC

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 10ºC.

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

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

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

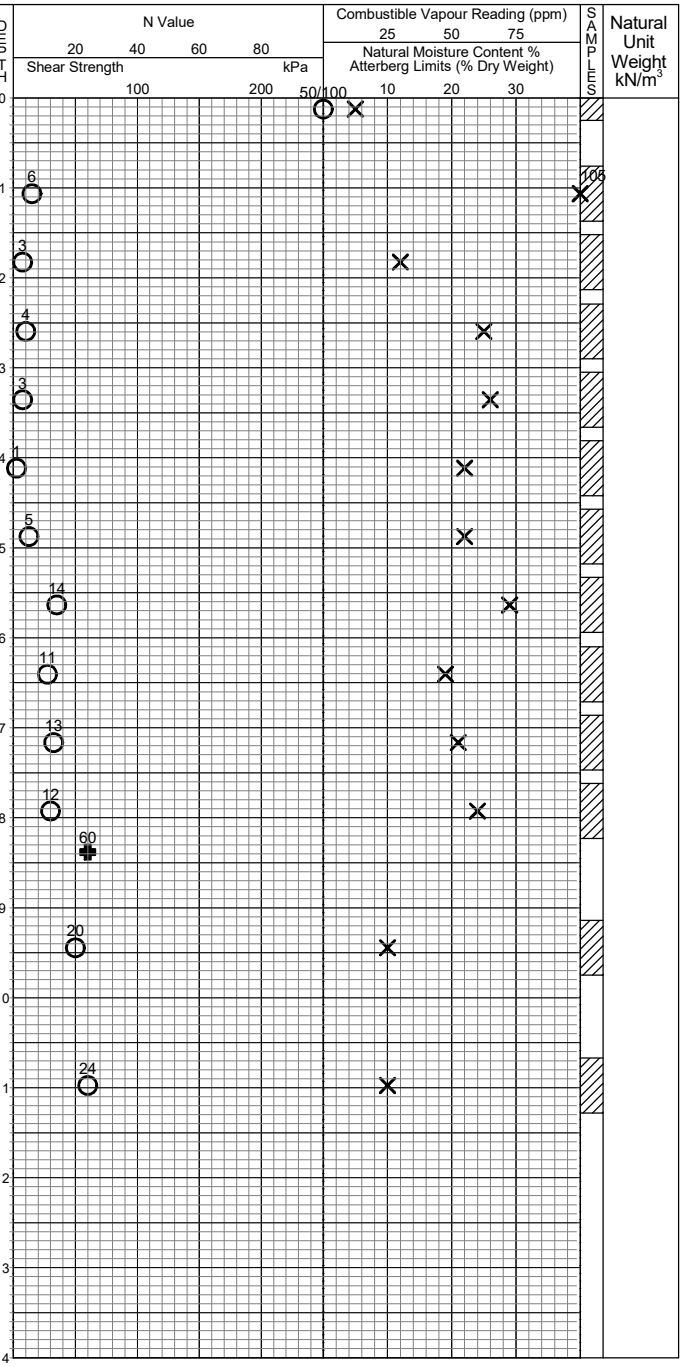
Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

Soil Description	ELEV. m
GRANULAR FILL: (~250 mm thick)	92.07
FILL: gravelly sand, some organics, some wood pieces, trace asphalt fragments, dark brown, moist saturated below 0.8 m	~91.8
FILL: sandy silt, trace gravel, trace organics, dark brown, moist	~90.6
FILL: silty clay, trace gravel, trace organics, trace deleterious materials, trace wood pieces, grey, wet	~89.8
FILL: silty sand, some gravel, trace clay, trace organics, trace deleterious materials, dark brown, wet	~86.7
FILL: silty clay, trace organics, trace asphalt fragments, trace wood pieces, trace deleterious materials, grey, wet	~86.0
SANDY SILT TILL: some clay, trace gravel, brown, moist, compact	~82.9
Borehole terminated at 11.3 m depth below grade.	~80.8

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	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

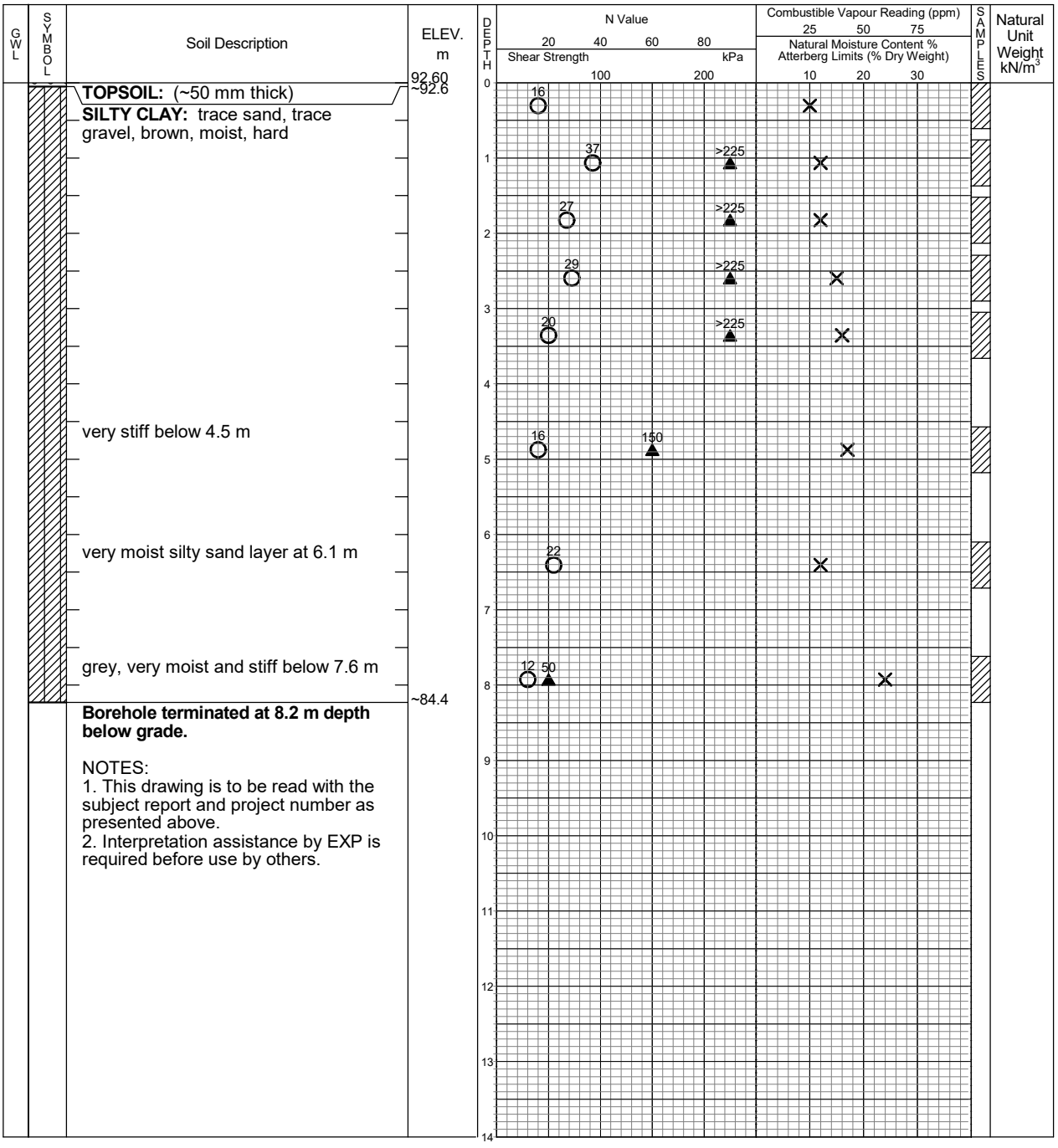
Date Drilled: September 24, 2024

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

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
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

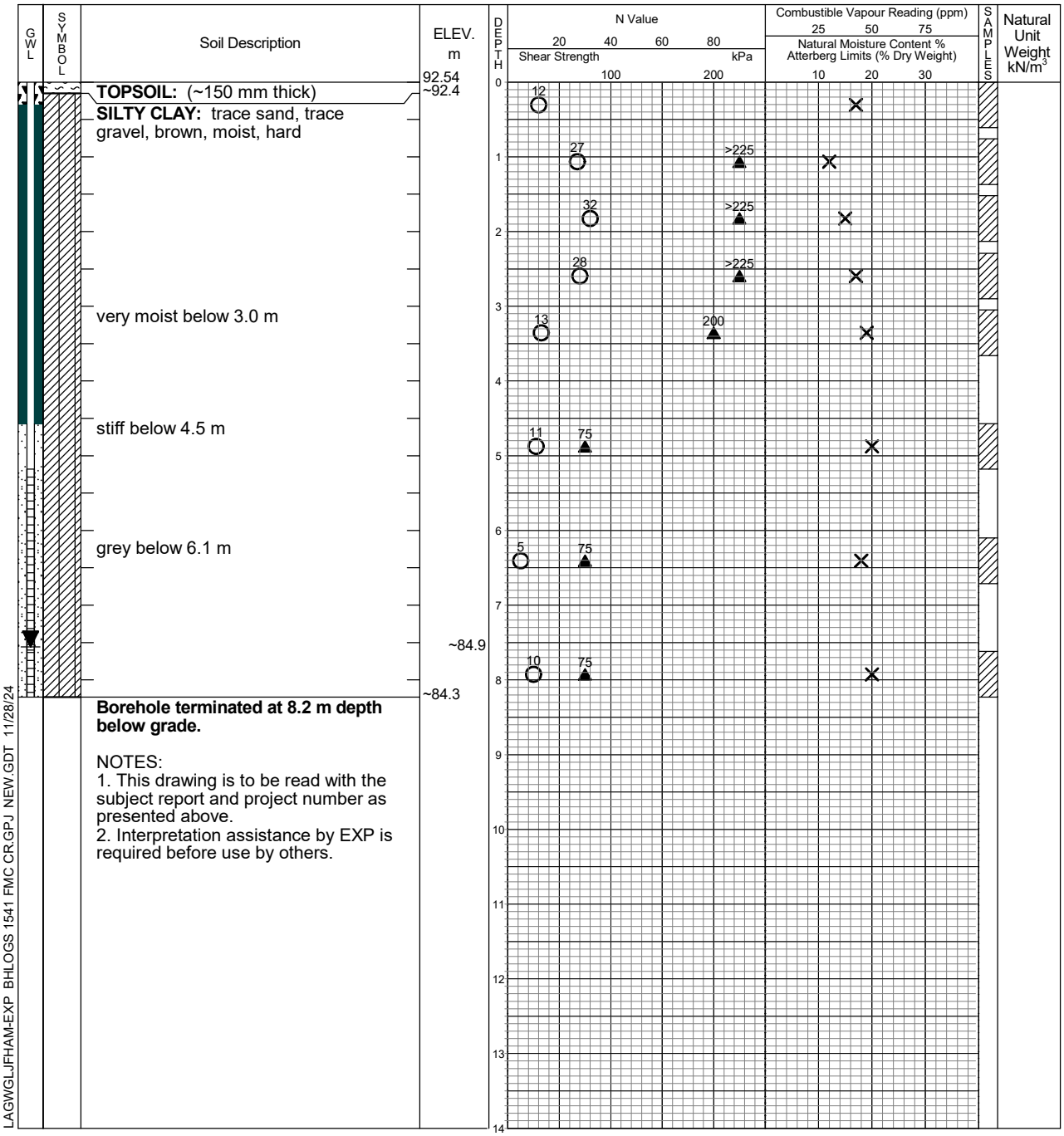
Date Drilled: September 26, 2024

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

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
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
October 24, 2024	7.6	-

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

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

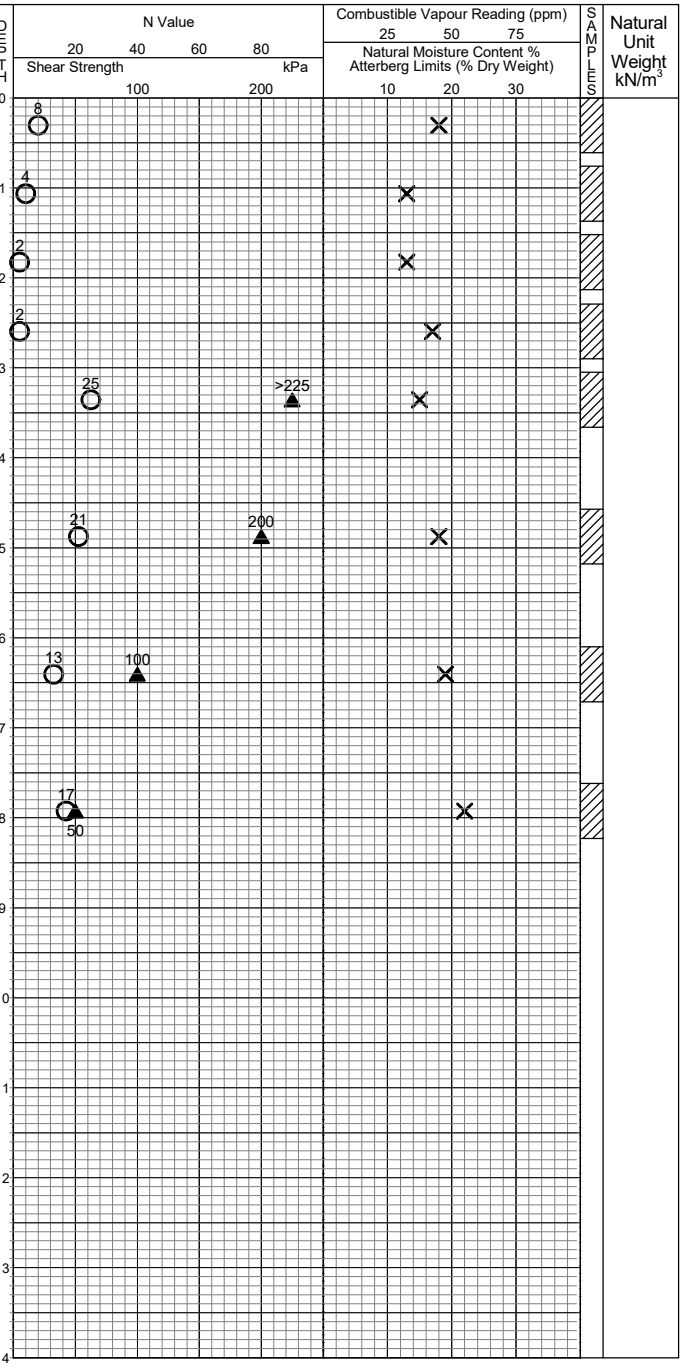
Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	ELEV. m
			92.60
		TOPSOIL: (~100 mm thick)	~92.5
		FILL: silty sand, trace clay, trace organics, dark brown, wet	
			~89.6
▽		**SILTY CLAY:** trace sand, trace gravel, grey, moist, hard	~89.1
		very moist and very stiff below 4.5 m	
		stiff below 6.0 m	
			~84.4
		Borehole terminated at 8.2 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.



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	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

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

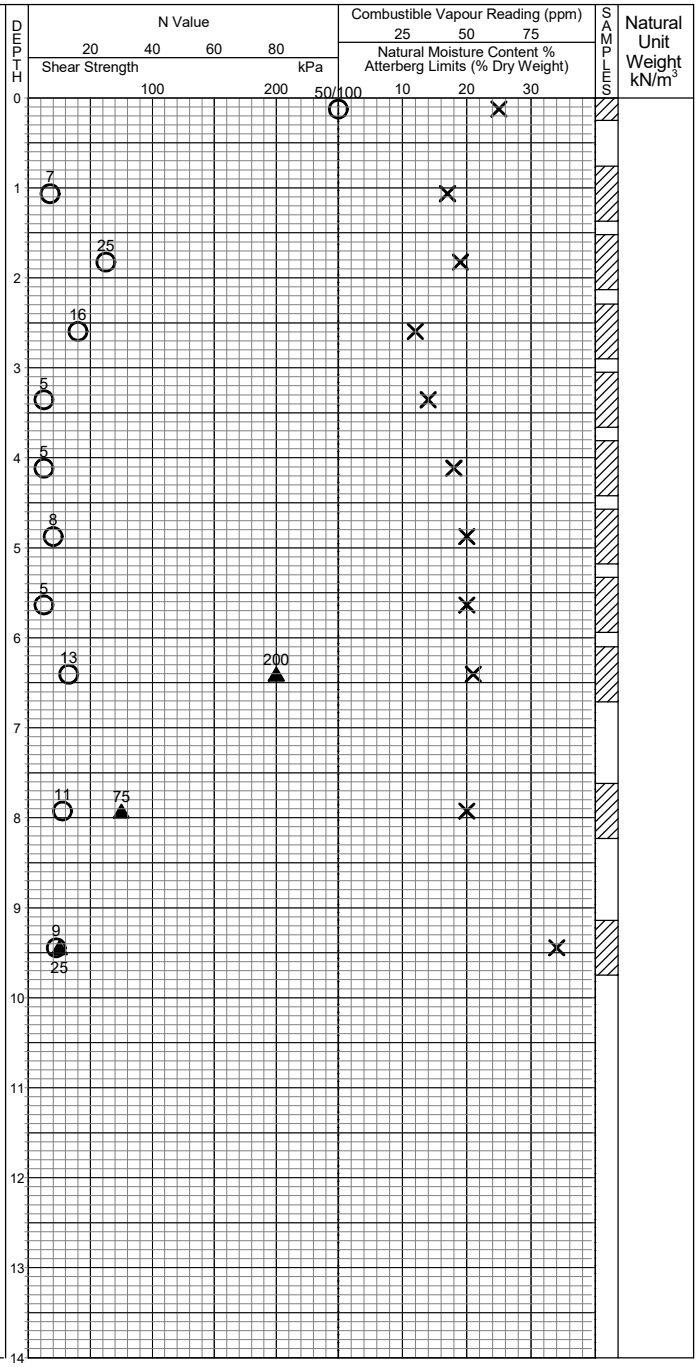
Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	ELEV. m
			91.68
		TOPSOIL: (~50 mm thick)	~91.6
		FILL: silty sand, trace gravel, trace asphalt fragments, black, wet	~90.9
		FILL: sandy silt, some clay, trace gravel, trace deleterious materials, dark brown, wet	~90.2
		FILL: silty clay, trace sand, trace gravel, trace organics, trace asphalt fragments, brown, moist	
			~86.4
		FILL: silty sand, some clay, trace organics, brown and grey, wet	~85.6
		SILTY CLAY: trace sand, trace gravel, brown, very moist, hard	
		grey and stiff below 7.6 m	
		wet and firm below 9.1 m	~81.9
		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.



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	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

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

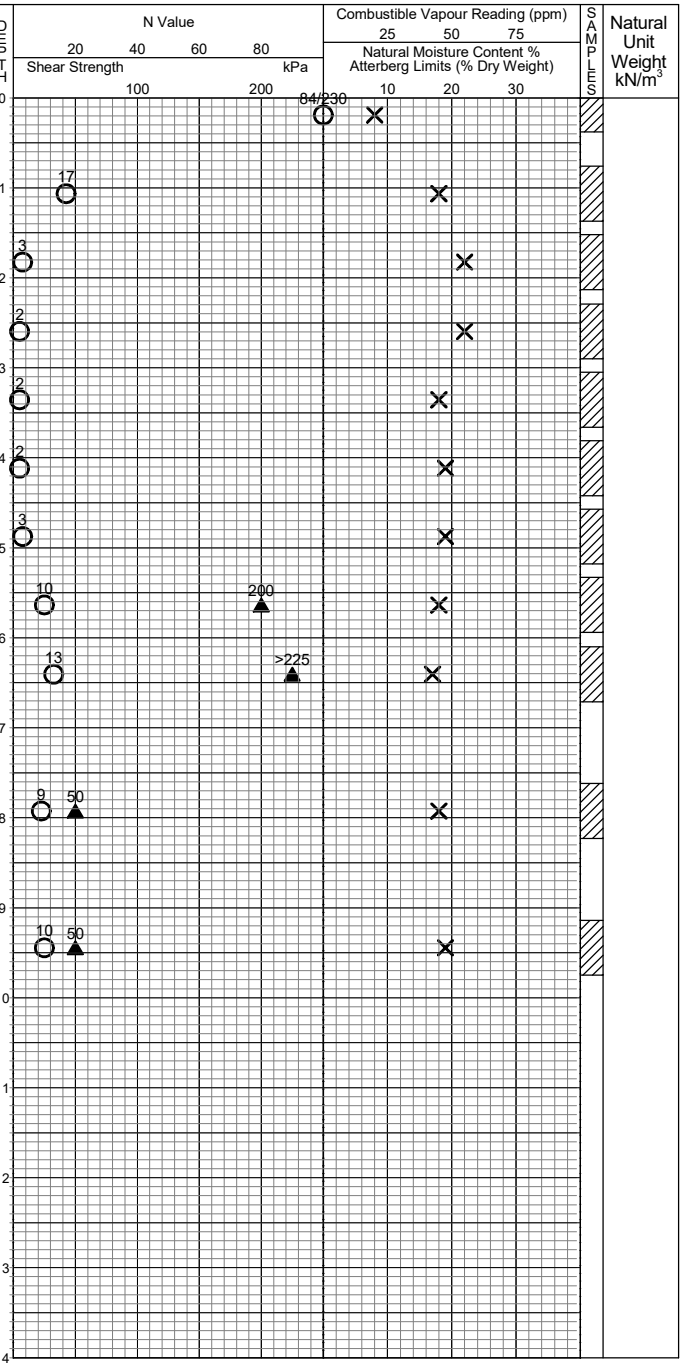
Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	ELEV. m
		GRANULAR FILL: (~450 mm thick)	92.12
		FILL: gravelly sand, trace asphalt fragments, brown, moist	~91.7
		FILL: silty clay, trace sand, trace gravel, trace plastic fragments, brown, moist	~91.4
		FILL: sandy silt, some clay, brown, wet	~90.6
		FILL: silty clay, some sand, trace gravel, trace organics, dark brown, very moist	~89.8
		SILTY CLAY: trace sand, trace gravel, brown, very moist, hard	~86.8
		grey and stiff below 7.6 m	
		Borehole terminated at 9.8 m depth below grade.	~82.4

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.



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

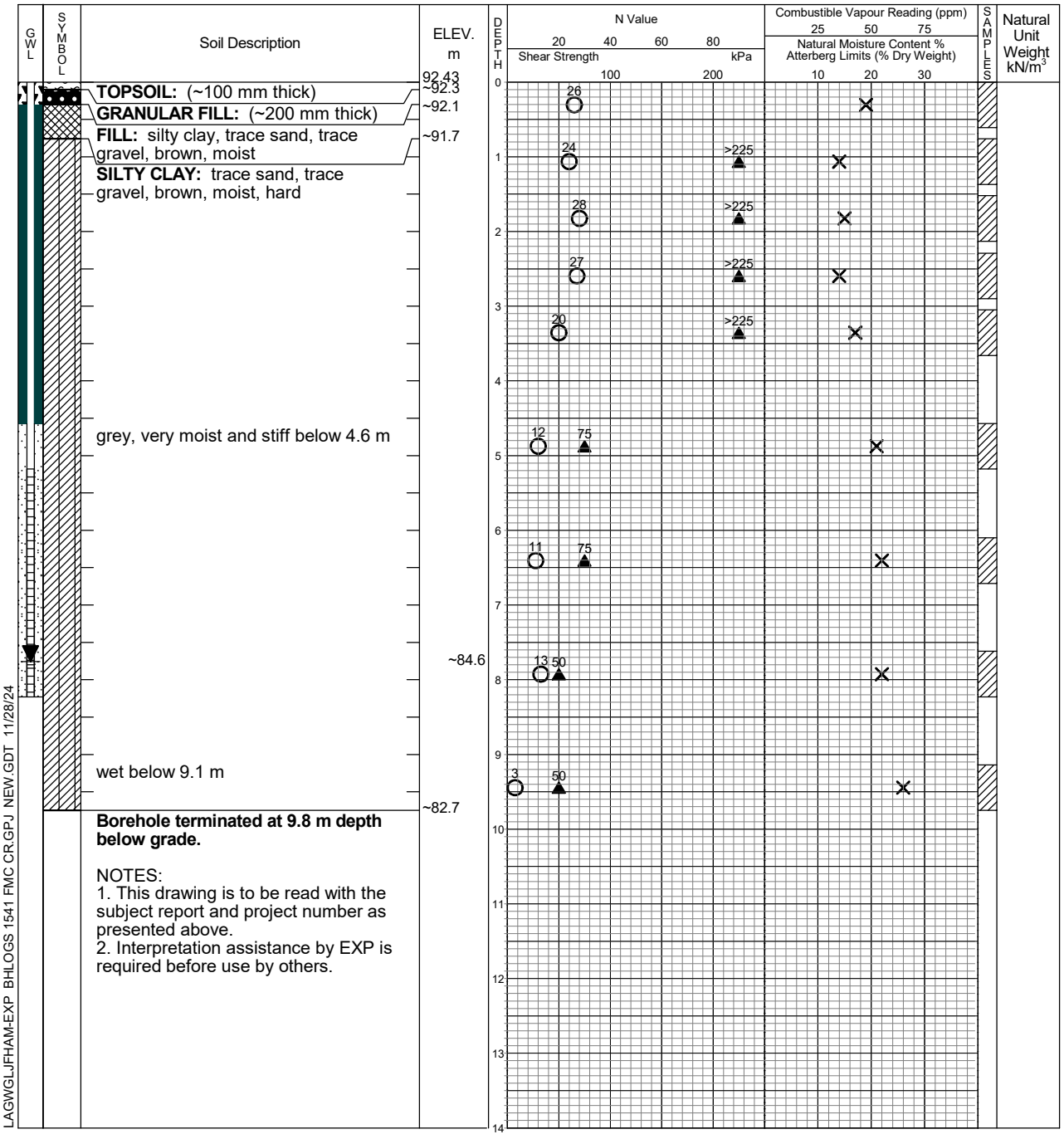
Date Drilled: September 24, 2024

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

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
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
October 24, 2024	7.8	-

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

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

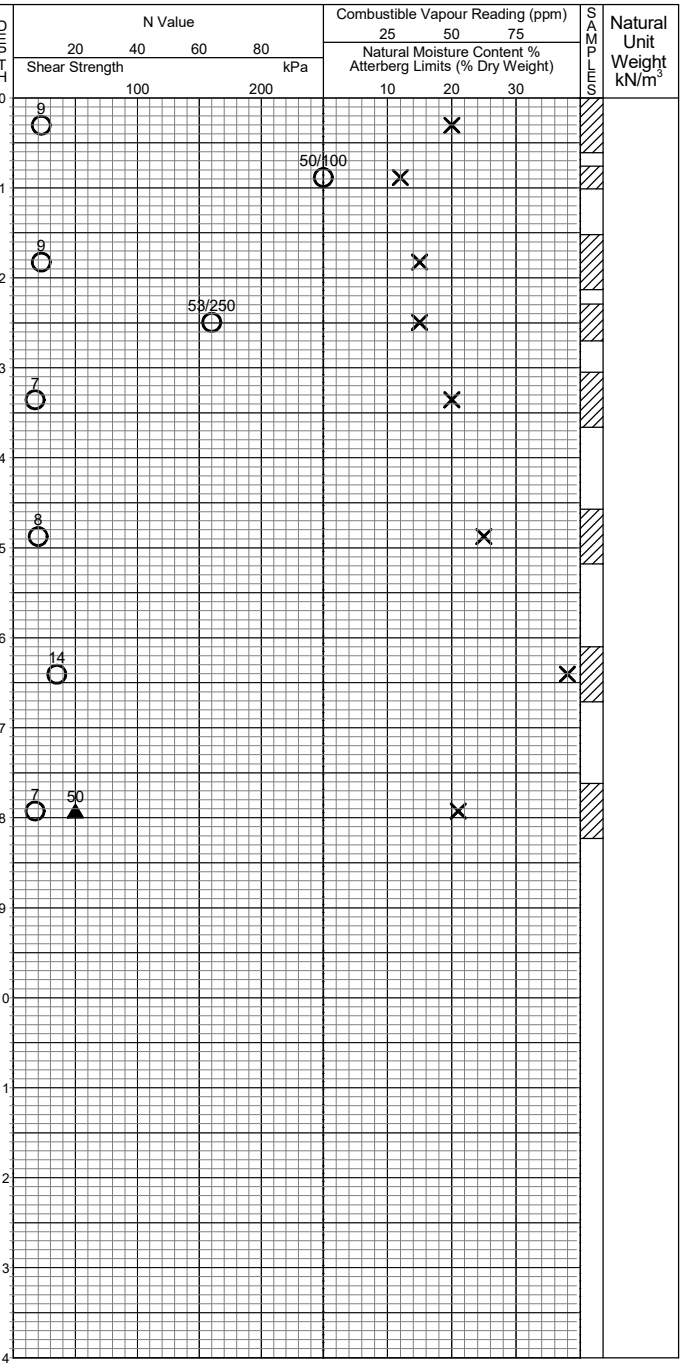
Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	ELEV. m
			92.64
		TOPSOIL: (~130 mm thick)	~92.5
		FILL: silty clay, trace sand, trace gravel, brown, moist	~91.9
		FILL: gravelly sand, trace silt, trace brick fragments, brown, moist	~91.1
		FILL: silty clay, some gravel, trace sand, trace organics, dark brown, moist trace ashphalt fragments at 2.3 m	
		POSSIBLE FILL: silty clay, some organics, trace sand, black, wet (possible alluvial deposit)	~86.5
		SILTY CLAY: trace sand, trace gravel, grey, very moist, stiff	~85.0
		Borehole terminated at 8.2 m depth below grade.	~84.4

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.



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

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 Plan was 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.

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^{o} 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 1 Background Site Condition Standards (SCS) for Residential/Parkland/Institutional/Commerical/Community/Industrial (RPI/ICC) property use, and medium to fine textured soils (hereinafter referred to as the "Table 1 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 1 SCS with the exception of the concentration of selenium in sample BH5-23. However, BH5-23 was re-sampled during round 2 and round 3 of groundwater monitoring and was found to be within the Table 1 SCS both times. As such, it was removed as a COC. 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 1 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.

GROUND WATER FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES
Metals, Hydride-Forming Metals and Other Regulated Parameters

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

December 2024

Location ID	MDL*	BH5-23		RPD	Alert Limit
Field Sample ID		BH5-23	BH5-23-0		
Lab ID		6194111	6194131		
Sampling Date		02-Oct-24	02-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		
Metals					
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	**56**	>20%
Nickel	1	14.9	11.5	26	>20%
Selenium	1	5.3	3.2	**49**	>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%
Other Regulated Parameters					
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-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

December 2024

Location ID	MDL*	BH7		RPD	Alert Limit
Field Sample ID		BH7	BH7-0		
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		
Metals					
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	16	>20%
Copper	1	1.3	1.7	**27**	>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	**54**	>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	0.96	**37**	>20%
Zinc	5	<5.0	<5.0	nc	>20%
Other Regulated Parameters					
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-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario

December 2024

Location ID	MDL*	BH7		RPD	Alert Limit
Field Sample ID		BH7	BH7-0		
Lab ID		6376833	6376834		
Sampling Date		02-Dec-24	02-Dec-24		
Screen Interval Depth (mbgs)		4.57 - 7.62	4.57 - 7.62		
Consultant		EXP	EXP		
Laboratory		AGAT	AGAT		
Certificate of Analysis Number		24H227786	24H227786		
Metals					
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	435	8	>20%
Cadmium	0.2	<0.20	<0.20	nc	>20%
Chromium	2	<2.0	<2.0	nc	>20%
Cobalt	0.5	2.64	2.59	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	**49**	>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	**67**	>20%
Zinc	5	<5.0	<5.0	nc	>20%
Other Regulated Parameters					
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**.

SOIL FIELD DUPLICATES - RELATIVE PERCENT DIFFERENCES

Petroleum Hydrocarbon Parameters

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario
December 2024

Location ID	MDL*	BH7		RPD	Alert Limit
Field Sample ID		BH7-SS3	BH7-SS30		
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		
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
December 2024

Location ID	MDL*	BH7		RPD	Alert Limit
Field Sample ID		BH7-SS3	BH7-SS30		
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-Dibromoetha	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

December 2024

Location ID	MDL*	BH7		RPD	Alert Limit
Field Sample ID		BH7-SS2	BH7-SS20		
Lab ID		6177152	6177166		
Sampling Date		24-Sep-24	24-Sep-24		
Soil Sample Depth (mbgs)		0.76 - 1.37	0.76 - 1.37		
Consultant		EXP	EXP		
Laboratory		AGAT	AGAT		
Certificate of Analysis Number		24H201833	24H201833		
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/j)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-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario
December 2024

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		
Metals					
Antimony	0.8	<0.8	<0.8	nc	>30%
Arsenic	1	5	7	**33**	>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	**40**	>30%
Lead	1	35	49	**33**	>30%
Molybdenum	0.5	1.2	1.9	**45**	>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	**45**	>30%
Other Regulated Parameters					
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	**15**	>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

December 2024

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		
Total Polychlorinated Biphenyls	0.1	<0.1	<0.1	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

Organochlorine Pesticides

GTR-24000672-C0, 1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario
December 2024

Location ID	MDL*	BH7		RPD	Alert Limit
Field Sample ID		BH7-SS2	BH7-SS20		
Lab ID		6177152	6177166		
Sampling Date		24-Sep-24	24-Sep-24		
Soil Sample Depth (mbgs)		0.76 - 1.37	0.76 - 1.37		
Consultant		EXP	EXP		
Laboratory		AGAT	AGAT		
Certificate of Analysis Number		24H201833	24H201833		
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
December 2024

Location ID	MDL*	BH5-23		RPD	Alert Limit
Field Sample ID		BH5-23	BH5-23-0		
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		
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

December 2024

Location ID	MDL*	BH7		RPD	Alert Limit
Field Sample ID		BH7	BH7-0		
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		
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

December 2024

Location ID	MDL*	BH4		RPD	Alert Limit
Field Sample ID		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		
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
December 2024

Location ID	MDL*	BH5-23		RPD	Alert Limit
Field Sample ID		BH5-23	BH5-23-0		
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-Dibromoethar	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
December 2024

Location ID	MDL*	BH7		RPD	Alert Limit
Field Sample ID		BH7	BH7-0		
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		
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-Dibromoethar	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

December 2024

Location ID	MDL*	BH5-23		RPD	Alert Limit
Field Sample ID		BH5-23	BH5-23-0		
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

December 2024

Location ID	MDL*	BH7		RPD	Alert Limit
Field Sample ID		BH7	BH7-0		
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

December 2024

Location ID	MDL*	BH4		RPD	Alert Limit
Field Sample ID		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**.

TRIP BLANK: Volatile Organic Compounds

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

December 2024

Location ID	**Units**	**Alert Limit**	**Minimum RDL***	**Trip Blank**
Field Sample ID				**Trip Blank**
Lab ID				**6194133**
Sampling Date				**21-Nov-24**
Screen Interval Depth (mbgs)				**-**
Consultant				**EXP**
Laboratory				**AGAT**
Certificate of Analysis Number				**24H204750**
Acetone	µg/L	5	1	<1.0
Benzene	µg/L	1	0.2	<0.20
Bromodichloromethane	µg/L	1	0.2	<0.20
Bromoform	µg/L	0.5	0.1	<0.10
Bromomethane	µg/L	1	0.2	<0.20
Carbon Tetrachloride	µg/L	1	0.2	<0.20
Chlorobenzene	µg/L	0.5	0.1	<0.10
Chloroform	µg/L	1	0.2	<0.20
Dibromochloromethane	µg/L	0.5	0.1	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.1	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.1	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.1	<0.10
Dichlorodifluoromethane	µg/L	2	0.4	<0.40
1,1-Dichloroethane	µg/L	1.5	0.3	<0.30
1,2-Dichloroethane	µg/L	1	0.2	<0.20
1,1-Dichloroethylene	µg/L	1.5	0.3	<0.30
cis-1,2-Dichloroethylene	µg/L	1	0.2	<0.20
trans-1,2-Dichloroethylene	µg/L	1	0.2	<0.20
1,2-Dichloropropane	µg/L	1	0.2	<0.20
cis- & trans-1,3-Dichloropropene	µg/L	1.5	0.3	<0.30
Ethylbenzene	µg/L	0.5	0.1	<0.10
Ethylene Dibromide (1,2-Dibromoethan	µg/L	0.5	0.1	<0.10
Hexane (n)	µg/L	1	0.2	<0.20
Methylene chloride (Dichloromethane)	µg/L	1.5	0.3	<0.30
Methyl ethyl ketone (2-Butanone)	µg/L	5	1	<1.0
Methyl Isobutyl Ketone	µg/L	5	1	<1.0

TRIP BLANK: Volatile Organic Compounds

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

December 2024

Location ID	**Units**	**Alert Limit**	**Minimum RDL***	**Trip Blank**
Field Sample ID				**Trip Blank**
Lab ID				**6194133**
Sampling Date				**21-Nov-24**
Screen Interval Depth (mbgs)				**-**
Consultant				**EXP**
Laboratory				**AGAT**
Certificate of Analysis Number				**24H204750**
Methyl t-butyl ether (MTBE)	µg/L	1	0.2	<0.20
Styrene	µg/L	0.5	0.1	<0.10
1,1,1,2-Tetrachloroethane	µg/L	0.5	0.1	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.1	<0.10
Tetrachloroethylene	µg/L	1	0.2	<0.20
Toluene	µg/L	1	0.2	<0.20
1,1,1-Trichloroethane	µg/L	1.5	0.3	<0.30
1,1,2-Trichloroethane	µg/L	1	0.2	<0.20
Trichloroethylene	µg/L	1	0.2	<0.20
Trichlorofluoromethane	µg/L	2	0.4	<0.40
Vinyl Chloride	µg/L	0.85	0.17	<0.17
m-Xylene + p-Xylene	µg/L	1	0.2	<0.20
o-Xylene	µg/L	0.5	0.1	<0.10
Xylenes (total)	µg/L	1	0.2	<0.20

NOTES:

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.

Exceedances of the Alert Limit based on the Minimum Reporting Detection Limit is shown in bold, red and shaded.

Appendix G – Laboratory Certificates of Analysis

AGAT Laboratories

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
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.*

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY:JP

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

		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
Parameter	Unit	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 CaCl2 Extraction	pH Units		NA	7.46	7.38	7.24	7.14

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK, NOTL

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 CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY:JP

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

		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
Parameter	**Unit**	**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

Certified By: NPopowich

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK, NOTL

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: N Popnikolof

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY:JP

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

		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
Parameter	Unit	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: NPopowich

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK, NOTL

SAMPLED BY:JP

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2024-09-26

DATE REPORTED: 2024-10-03

		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
Parameter	**Unit**	**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: N Popnikolof

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

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

		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
Parameter	Unit	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: N Popnikolof

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

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

		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
Parameter	**Unit**	**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
Surrogate	**Unit**	**Acceptable Limits**								
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: N Popnikolof

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Exceedance Summary

AGAT WORK ORDER: 24H201833

PROJECT: GTR-24000672-C0-2

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

AGAT Laboratories
5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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)															

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
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%

AGAT Laboratories
5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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: N Popowkof

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Soil Analysis			
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 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Trace Organics Analysis			
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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

AGAT Laboratories

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

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

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

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:
1. Email: Amanda.catenaro@exp.com
2. Email: Jaimesyn.patterson@exp.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 1 (Indicate One)
☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture (Check One) ☐ Coarse ☐ Fine

☐ Regulation 406
Table ____ (Indicate One)
☐ Ind/Com ☐ Res/Park ☐ Agriculture
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
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):

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-240000072-00-1
Site Location: Fourmile 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.

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	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	O. Reg 406: EC, SAR	O. Reg 406: Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ Metals ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs TCLP:	Corrosivity: ☐ Moisture ☐ Sulphide	OC Restrictions	Potentially Hazardous or High Concentration (Y/N)
1. BH2-SS2	Sept.24 24	AM	1	S			X				X							X	
2. BH2-SS5			1		HOLD		X				X							X	
3. BH2-SS3			3						X	X									
4. BH2-SS7			3						X	X									
5. BH4-SS2			1				X				X							X	
6. BH4-SS3			3						X	X									
7. BH4-SS7			3						X	X									
8. BH4-SS8			3		HOLD				X	X									
9. BH7-SS1			1				X												
10. BH7-SS10			1				X												
11. BH7-SS2			1								X							X	

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
JAIME Patterson	Sept.25/24	4:20		Sept-25/24	4:20pm
	Sept 26/24	3PM		26.09	16.00

Page 1 of 2

N°: T-161687

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

AGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Have feedback? Scan here for a quick survey!

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only

Work Order #: 24H201533

Cooler Quantity: 4 COOLER

Arrival Temperatures:

Depot Temperatures: 8.8 | 8.2 | 8.0

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: LOOSE ICE

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
Table ___ *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Regulation 406
Table ___ *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
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-240006672-CO-2

Site Location: 1544 & 1546 Four mile Creek, NOT

Sampled By: JP

AGAT Quote #: PO:

Please note: If quotation number is not provided, client will be billed full price for analysis.

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	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI ☐ Hg ☐ HWSB	BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Arochlors ☐	O. Reg 406: Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	OC Pesticides						Potentially Hazardous or High Concentration (Y/N)
1. BH7-552Ø	Sept.24	PM	1	S					X		X						X							
2. BH7-553			3						X	X														
3. BH7-553Ø			3						X	X														
4. BH7-557			3						X	X														
5. BH7-559			3		HOLD				X	X														
6.																								
7.																								
8.																								
9.																								
10.																								
11.																								

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Jaime Patterson	Sept25/24	4:20pm	DMC	Sept25/24	4:20pm
DMC	Sept26/24	3pm	AB	26/09	16:00

Page 2 of 2

N°: T-160743

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

AGAT Laboratories

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
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 Chakraberty, 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.*

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Four Mile creek

SAMPLED BY:JP

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

		SAMPLE DESCRIPTION:		BH1 - SS1	BH5 - SS1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-25	2024-09-25
Parameter	Unit	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	**0.882**
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	0.825	0.308
pH, 2:1 CaCl2 Extraction	pH Units		NA	9.18	11.4

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Four Mile creek

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 CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Four Mile creek

SAMPLED BY:JP

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

		SAMPLE DESCRIPTION:		BH1 - SS2	BH5 - SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-25	2024-09-25
Parameter	**Unit**	**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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Four Mile creek

SAMPLED BY:JP

O. Reg. 153(511) - PCBs (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

		SAMPLE DESCRIPTION:		BH1 - SS1	BH1 - SS1 - O	BH5 - SS2
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2024-09-25	2024-09-25	2024-09-25
Parameter	**Unit**	**G / S**	**RDL**	**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
Surrogate	**Unit**	**Acceptable Limits**				
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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Four Mile creek

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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Four Mile creek

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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Four Mile creek

SAMPLED BY:JP

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

		SAMPLE DESCRIPTION:		BH1 - SS2	BH5 - SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-25	2024-09-25
Parameter	Unit	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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Four Mile creek

SAMPLED BY:JP

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

		SAMPLE DESCRIPTION:		BH1 - SS2	BH5 - SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-25	2024-09-25
Parameter	**Unit**	**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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Exceedance Summary

AGAT WORK ORDER: 24H202348

PROJECT: GTR-24000672-C0-2

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

AGAT Laboratories
5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Quality Assurance

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

Trace Organics Analysis

RPT Date: Oct 03, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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%
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

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Quality Assurance

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

Trace Organics Analysis (Continued)

RPT Date: Oct 03, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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%

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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Soil Analysis			
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 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Trace Organics Analysis			
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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

AGAT Laboratories

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 #: 24H202348
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 Catenaro
Address: 220 Commerce Valley Dr. W. Suite 110 Markham, ON
Phone: Fax:
Reports to be sent to:
1. Email: Amanda.Catenaro@exp.com
2. Email: Jaimesyn.Patterson@exp.com

Regulatory Requirements: (Please check all applicable boxes)

- ☒ Regulation 153/04 — Table 1 (Indicate One) ☐ Ind/Com ☐ Res/Park ☐ Agriculture
- Soil Texture (Check One) ☐ Coarse ☐ Fine
- ☐ Regulation 406 — Table (Indicate One) ☐ Ind/Com ☐ Res/Park ☐ Agriculture
- ☐ Regulation 558
- ☐ CCME
- ☐ Sewer Use ☐ Sanitary ☐ Storm — 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):
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-24000672-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.

Is this submission for a Record of Site Condition (RSC)? ☒ Yes ☐ No

Report Guideline on Certificate of Analysis ☒ Yes ☐ No

Legal Sample ☐

Invoice Information: Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Sample Matrix Legend
GW Ground Water; O Oil; P Paint; S Soil; SD Sediment; SW Surface Water; R Rock/Shale

	Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	O. Reg 406: EC, SAR	O. Reg 406: Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide						Potentially Hazardous or High Concentration (Y/N)
1.	BH1-SS1	Sept.25/24	AM	1	S	Limited Sample		X					X											
2.	BH1-SS1-D	↓	↓		↓	Limited Sample			—				X											
3.	BH1-SS2	↓	↓	4	↓					X	X	X												
4.	BH1-SS6	↓	↓	3	↓	HOLD				X	X													
5.	BH1-SS7	↓	↓	2	↓	HOLD		X				X	X											
6.	BH5-SS1	↓	↓	1	↓			X				~~X~~	~~X~~											
7.	BH5-SS2	↓	↓	3	↓					X	X													
8.	BH5-SS7	↓	↓	5	↓	HOLD		X		X	X	X	X											
9.	BH5-SS2			1								X	X											
10.			AM PM																					
11.			AM PM																					

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Jaime Patterson	Sept.26 2024	4pm	BTMC	Sept 26/24	3:25pm
BTMC	Sept 27/24	3pm		27.09	16.40

Page 1 of 1

Nº: T-161662

AGAT Laboratories

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
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 Chakraberty, 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.*

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Far Mile Creek Road

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

		SAMPLE DESCRIPTION:		BH3 - SS1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2024-09-26
Parameter	Unit	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 CaCl2 Extraction	pH Units		NA	6.87

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Far Mile Creek Road

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 CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Far Mile Creek Road

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: R. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Far Mile Creek Road

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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Far Mile Creek Road

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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Far Mile Creek Road

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

		SAMPLE DESCRIPTION:		BH3 - SS3	BH3 - SS7
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-26	2024-09-26
Parameter	Unit	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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Far Mile Creek Road

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

		SAMPLE DESCRIPTION:		BH3 - SS3	BH3 - SS7
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-26	2024-09-26
Parameter	Unit	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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H202434

PROJECT: GTR-24000672-C0-2

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro

SAMPLING SITE:Far Mile Creek Road

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-09-27

DATE REPORTED: 2024-10-03

		SAMPLE DESCRIPTION:		BH3 - SS3	BH3 - SS7
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2024-09-26	2024-09-26
Parameter	**Unit**	**G / S**	**RDL**	**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
Surrogate	**Unit**	**Acceptable Limits**			
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. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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:

Soil Analysis

RPT Date: Oct 03, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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 Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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	Dup #1	Dup #2	RPD	Method Blank	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%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
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%

AGAT Laboratories
5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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	Dup #1	Dup #2	RPD	Method Blank	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: R. Chakraberty

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Soil Analysis			
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 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Trace Organics Analysis			
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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

AGAT Laboratories

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

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: 2270 Commerce Valley Dr. West Suite 110, Markham ON
Phone: Fax:
Reports to be sent to:
1. Email: Amanda.Cafenaro@exp.com
2. Email: Jaimesyn.Patterson@exp.com

Project Information:

Project: GTR-240006720-0
Site Location: Four Mile Creek Road, NOTL, ON
Sampled By:
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table (Indicate One): ☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☐ Fine

☐ Regulation 406 — Table (Indicate One): ☐ Ind/Com ☐ Res/Park ☐ Agriculture
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — 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

Legal Sample ☐

Sample Matrix Legend

GW	Ground Water	SD	Sediment
O	Oil	SW	Surface Water
P	Paint	R	Rock/Shale
S	Soil		

Laboratory Use Only

Work Order #: 24H202434
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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	O. Reg 406: EC, SAR	O. Reg 406: Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	OC Pesticides	Potentially Hazardous or High Concentration (Y/N)
1. BH3-SS1	Sept.26	AM	1	S			X												
2. BH3-SS2		AM	1								X						X		
3. BH3-SS4			1		HOLD						X						X		
4. BH3-SS5			1		HOLD		X												
5. BH3-SS3			3						X	X									
6. BH3-SS7			3						X	X									
7. BH3-SS8			3		HOLD				X	X									
8. ~~BH1-SS1~~	Sept.25		1								X								
9. ~~BH1-SS7~~			1		HOLD additional Sample						X	X							
10. ~~BH5-SS2~~			1								X	X							
11. ~~BH3-SS7~~			1		HOLD additional Sample						X	X							

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Jaime Patterson	2:45 Sept.27			Sept.27/24	2:45 PM
	Sept.27/24	3PM		27.09	16.40

Page 1 of 2

No: T-160314

White Copy · AGAT | Yellow Copy · AGAT | Pink Copy · Client

AGAT Laboratories

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
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.*

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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) - PAHs (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

		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
Parameter	**Unit**	**G / S**	**RDL**	**6194080**	**6194108**	**6194109**	**6194111**	**6194131**
Naphthalene	µg/L	7	0.20	0.44	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	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
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	0.1	0.10	**0.22**	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	0.1	0.10	**0.11**	<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
Pyrene	µg/L	0.2	0.20	**0.22**	<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
Chrysene	µg/L	0.1	0.10	**0.11**	<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
Benzo(k)fluoranthene	µg/L	0.1	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
Indeno(1,2,3-cd)pyrene	µg/L	0.2	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
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Napthalene	µg/L	2	0.20	0.22	<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: 

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

				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
Parameter	**Unit**	**G / S**	**RDL**		**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: N Popnikolof

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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 (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		
Parameter	Unit	G / S	RDL	6194133
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: N Popnikolof

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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 (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		
Parameter	**Unit**	**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: N Popnikolof

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

		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
Parameter	Unit	G / S	RDL	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	**0.81**	<0.10	<0.10	<0.10	<0.10

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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**

				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
Parameter	**Unit**	**G / S**	**RDL**		**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
Surrogate	**Unit**	**Acceptable Limits**							
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: NPopowich

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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) - Metals & Inorganics (Water)

DATE RECEIVED: 2024-10-02

DATE REPORTED: 2024-10-10

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
Parameter	Unit	G / S	RDL	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	**4.43**	**5.06**
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	**14.9**	11.5
Dissolved Selenium	µg/L	5	1.0	<1.0	<1.0	1.0	3.4	**5.3**	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	**13.7**	**27.9**	**27.6**
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	uS/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: Iris Verástegui

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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) - 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: Iris Verástegui

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Exceedance Summary

AGAT WORK ORDER: 24H204750

PROJECT: GTR-24000672-C0-2

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

AGAT Laboratories
5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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%

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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: N Popowkolof

AGAT Laboratories
5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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: Iris Verástegui

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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%

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.

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Trace Organics Analysis			
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
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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Water Analysis			
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

AGAT Laboratories

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

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. W. Suite 110 Markham ON
Phone: Fax:
Reports to be sent to:
1. Email: Amanda.catenaro@exp.com
2. Email: Jaimesyn.Patterson@exp.com

Project Information:

Project: GTR - 24000672 - 0000-2
Site Location: 1544-1546 Four 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.

Invoice Information:

Bill To Same: Yes [X] No [ ]
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

[X] Regulation 153/04 — Table 1 (Indicate One) — [ ] Ind/Com [ ] Res/Park [ ] Agriculture
Soil Texture (Check One): [ ] Coarse [ ] Fine
[ ] Regulation 406 — Table (Indicate One) — [ ] Ind/Com [ ] Res/Park [ ] Agriculture
[ ] Regulation 558
[ ] CCME
[ ] Sewer Use [ ] Sanitary [ ] Storm — Region
[ ] Prov. Water Quality Objectives (PWQO)
[ ] Other — Indicate One

Is this submission for a Record of Site Condition (RSC)? [X] Yes [ ] No

Report Guideline on Certificate of Analysis [X] Yes [ ] No

Legal Sample [ ]

Sample Matrix Legend

GW	Ground Water	SD	Sediment
O	Oil	SW	Surface Water
P	Paint	R	Rock/Shale
S	Soil		

Laboratory Use Only

Work Order #: 24H 204750
Cooler Quantity: LOG 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

Turnaround Time (TAT) Required:

Regular TAT [X] 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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - [ ] CrVI, [ ] Hg, [ ] HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors [ ]	O. Reg 406: Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	O. Reg 406: EC, SAR	O. Reg 406: Regulation 406 SPLP Rainwater Leach mSPLP: [ ] Metals [ ] VOCs [ ] SVOCs [ ] DOC	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: [ ] M&I [ ] VOCs [ ] ABNs [ ] B(a)P [ ] PCBs	Corrosivity: [ ] Moisture [ ] 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			3							X								
7.																		
8.																		
9.																		
10.																		
11.																		

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Jaime Patterson	Oct-2/24	4:30pm	DJBC	Oct-2/24	4:30pm
DJBC	Oct-3/24	3PM		Oct-3	3:55

Page 1 of 1

N°: T - 163109

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

AGAT Laboratories

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
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.*

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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) - 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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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) - PAHs (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

		SAMPLE DESCRIPTION:		BH3	BH7	BH7-0	BH4
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2024-11-21 12:00	2024-11-21 12:00	2024-11-21 12:00	2024-11-21 12:00
Parameter	**Unit**	**G / S**	**RDL**	**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 Napthalene	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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

				SAMPLE DESCRIPTION:	BH3	BH7	BH7-0
				SAMPLE TYPE:	Water	Water	Water
				DATE SAMPLED:	2024-11-21 12:00	2024-11-21 12:00	2024-11-21 12:00
Parameter	**Unit**	**G / S**	**RDL**		**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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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) - VOCs (Water)

DATE RECEIVED: 2024-11-21 **DATE REPORTED: 2024-11-28**

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-11-21
Parameter	Unit	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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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) - VOCs (Water)

DATE RECEIVED: 2024-11-21 **DATE REPORTED: 2024-11-28**

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-11-21
Parameter	**Unit**	**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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

		SAMPLE DESCRIPTION:		BH3	BH7	BH7-0
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2024-11-21 12:00	2024-11-21 12:00	2024-11-21 12:00
Parameter	Unit	G / S	RDL	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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-11-21

DATE REPORTED: 2024-11-28

				SAMPLE DESCRIPTION:	BH3	BH7	BH7-0
				SAMPLE TYPE:	Water	Water	Water
				DATE SAMPLED:	2024-11-21 12:00	2024-11-21 12:00	2024-11-21 12:00
Parameter	**Unit**	**G / S**	**RDL**		**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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

		SAMPLE DESCRIPTION:		BH2-23	BH5-23	BH3	BH7	BH7-0
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2024-11-21 12:00	2024-11-21 12:00	2024-11-21 12:00	2024-11-21 12:00	2024-11-21 12:00
Parameter	Unit	G / S	RDL	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: Iris Verástegui

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Exceedance Summary

AGAT WORK ORDER: 24H224127

PROJECT: GTR-24000672-C0-4

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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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%

AGAT Laboratories
5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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%

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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: Iris Verástegui

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Trace Organics Analysis			
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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Water Analysis			
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

AGAT Laboratories

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 #: 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 Catenaro & Zenith Wong

Address: 220 Commerce Valley Dr. W. Suite 110 Markham ON

Phone: Fax:

Reports to be sent to:

1. Email: AmandaCatenaro@exp.com / Jaimesyn.

2. Email: Zenith.Wong@exp.com / Patterson@exp.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 1 (Indicate One): ☐ Ind/Com ☒ Res/Park ☐ Agriculture

Soil Texture (Check One): ☐ Coarse ☒ Fine

☐ Regulation 406 — Table (Indicate One): ☐ Ind/Com ☐ Res/Park ☐ Agriculture

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — 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-24003672-C0-4

Site Location: 1544 & 1546 Fourmile 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.

Legal Sample ☐

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:

Contact:

Address:

Email:

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	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	Metals & Inorganics (O. Reg 153)	Metals - ☒ CrVI, ☒ Hg, ☒ HWSB (O. Reg 153)	BTEX, F1-F4 PHCs (O. Reg 153)	VOC (O. Reg 153)	PAHs (O. Reg 153)	PCBs: Aroclors ☐	Regulation 406 Characterization Package (O. Reg 406)	pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach	mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ DOC	Landfill Disposal Characterization TCLP: (O. Reg 558)	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	BTEX	Potentially Hazardous or High Concentration (Y/N)
1.	Trip Blank	Nov 21	—	3	GW						X												
2.	BH2-23	↓	PM	4	↓		Y		X														
3.	BH5-23			4			Y		X														
4.	BH3			11			Y		X	X	X	X											
5.	BH7			11			Y		X	X	X	X											
6.	BH7-0			11			Y		X	X	X	X											
7.	BH4	↓	↓	7	↓							X										X	
8.			AM PM																				
9.			AM PM																				
10.			AM PM																				
11.			AM PM																				

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Jaime Patterson [signature]	Nov 21	4:45pm	[signature]	Nov 21/24	4:45pm
[signature]	Nov 22/24	3pm	[signature]	Nov 22	4:30pm

Page 1 of 1

Nº: T - 154537

AGAT Laboratories

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
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.*

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK RD, NOTL

SAMPLED BY:JP

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-10

		SAMPLE DESCRIPTION:		BH4	BH4-0
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2024-12-02 12:00	2024-12-02 12:00
Parameter	**Unit**	**G / S**	**RDL**	**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 Napthalene	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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK RD, NOTL

SAMPLED BY:JP

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-10

				SAMPLE DESCRIPTION:	BH4	BH4-0
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2024-12-02 12:00	2024-12-02 12:00
Parameter	**Unit**	**G / S**	**RDL**		**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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK RD, NOTL

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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK RD, NOTL

SAMPLED BY:JP

O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-10

		SAMPLE DESCRIPTION:		BH3	BH7	BH7-0	BH5-23
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2024-12-02 12:00	2024-12-02 12:00	2024-12-02 12:00	2024-12-02 12:00
Parameter	Unit	G / S	RDL	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	**4.50**
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	**20.3**	**11.2**	**11.7**	**30.8**
Dissolved Vanadium	µg/L	3.9	0.40	<0.40	0.78	1.56	**4.72**
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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Amanda Catenaro / Zenith Wong

SAMPLING SITE:1544 & 1546 FOUR MILE CREEK RD, NOTL

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:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Exceedance Summary

AGAT WORK ORDER: 24H227786

PROJECT: GTR-24000672-C0-4

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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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:

AGAT Laboratories
5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	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:

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Trace Organics Analysis			
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
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

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

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
Water Analysis			
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

AGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only

Work Order #: 24H227786

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 TLC

Report Information:

Company: Exp Services Inc.

Contact: Amanda Catenaro / Zenith Wong

Address: 220 Commerce Valley Dr. West, Suite 110 Markham ON

Phone: Fax:

Reports to be sent to:

1. Email: Amanda.Catenaro@exp.com / JamesynPatterson@exp.com

2. Email: Zenith.Wong@exp.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table (Indicate One): ☐ Ind/Com ☒ Res/Park ☐ Agriculture — Soil Texture (Check One): ☐ Coarse ☒ Fine

☐ Regulation 406 — Table (Indicate One): ☐ Ind/Com ☐ Res/Park ☐ Agriculture

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — 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):

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-240000672-CO-4

Site Location: B44 & B46 Four mile Creek Rd, Nort

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	O. Reg 153: Field Filtered - Metals, Hg, CrVI, DOC	Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg ☐ HWSB	BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	O. Reg 406: Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ Mtls ☐ VOCs ☐ ABNs ☐ BlapP ☐ PCBs	TCLP:	Corrosivity: ☐ Moisture ☐ Sulphide								Potentially Hazardous or High Concentration (Y/N)
1. BH3	Dec 2	PM	6	GW		Y		X																			
2. BH4			~~6~~ 7							X		X															
3. BH4-0			~~6~~ 7							X		X															
4. BH7			6			Y		X																			
5. BH7-0			6			Y		X																			
6. ~~Trip Blank~~										X																	
7. BH5-23			6			Y		X																			
8.																											
9.																											
10.																											
11.																											

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Jamie Patterson	Dec 3	11am	DJH C Bh	Dec3/24	11am
DJH C Bh	Dec3/24	3PM	MT	Dec 3	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

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 6A: Groundwater Contour Plan – October 2024

Figure 6B: Groundwater Contour Plan – December 2024

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

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

220 Commerce Valley Drive West, Markham, ON, Canada, L3T 0A8
T: +1.905.793.9800 | exp.com

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 22: On and Off-Site Human Health Conceptual Site Model

Figure 23: 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 1: Full Depth Background SCS for Residential/Parkland/Institutional/Commercial/Community/Industrial (RPI/ICC) property use, and medium to fine textured soils (hereinafter referred to as the "Table 1 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 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

Municipal Address(es)	1544 & 1546 Four Mile Creek Road, Niagara-on-the-Lake, Ontario
Current Land Use	Residential/Commercial
Proposed Land Use	Residential/Commercial
Legal Description	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
Property Identification Number (PIN)	46383-0086 (LT) 46383-0087 (LT)
Approximate Universal Transverse Mercator (UTM) coordinates	NAD83 17T 652530 m E 4786792 m N
Accuracy Estimate of UTM	10-15 m
Measurement Method	GPS
Site Area	1.07 hectares (2.66 acres)
Property Owner **Owner Contact** **Address**	Esfandiar Aghaei and On The Lake Developments Inc. 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 July 19, 2022, is included in Appendix B.

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)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
Site (On-Site PCAs)					
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)[1]	Potentially Contaminating Activity (PCA)[2]	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
Surrounding Properties (Off-Site PCAs)					
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)[1]	Potentially Contaminating Activity (PCA)[2]	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)[1]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern[2]	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, based on the distribution of groundwater contaminants observed at the Site from Figure 17, it does not appear that any contaminant plumes are travelling 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
- "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. 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 northern portion of the Site. The wetland is associated with Four Mile Creek. Based on the Town of Niagara-on-the-Lake Official Plan, this wetland 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 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). According to Part 3 – Land Use Policies, the Four Mile Creek estuary is understood to be a provincially significant wetland.

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 (BH1). 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, 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

2.2.2 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.

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 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.

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 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 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 x 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. Localized flow conditions across the site indicate a groundwater flow to the north/northwest in the unconfined clayey silt to silty clay aquifer; a groundwater contour plan is shown in Figure 6A and 6B.

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	No
	(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 one study area has a well used or intended for use as a source of water for human consumption or agriculture.	Yes
	(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; A. the single tier municipality has given written notice that it does not object to the application of the standards	No
Section 41 applies if	(i) property is within an area of natural significance	Yes
	(ii) property includes or is adjacent to an area of natural significance or part of such an area	Yes
	(iii) property includes land that is within 30 m of an area of natural significance or part of such an area	Yes
	(iv) soil at property has a pH value for surface soil less than 5 or greater than 9	Yes

Sensitivity	Classification	Does Sensitivity Apply to Site?
	(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. No Excess Soil was imported from another property and placed on-Site during the Phase Two ESA investigation.

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 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, at this time. However, at-grade parking it proposed for the central portion of the Site, between the two proposed building structures.

3. Contaminants of Concern

3.1 Applicable Site Condition Standards

For assessment purposes, EXP selected the MECP (2011) Table 1: Full Depth Background SCS for Residential/Parkland/Institutional/Commercial/Community/Industrial (RPI/ICC) property use, and medium to fine textured soils (hereinafter referred to as the "Table 1 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 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 the Town of Niagara-on-the-Lake Official Plan, this wetland is understood to be a provincially significant wetland;
  - According to Schedule C of the *Town of Niagara-on-the-Lake Official Plan (2017),* the Site is adjacent to a Conservation Area;

  - Six (6) surface soil samples and six (6) subsurface soil samples, including one (1) QA/QC field duplicate (QA/QC and BH7-SS11), were submitted for pH analysis. The pH of all soil samples ranged from 6.87 to 11.4. As such, the pH of surface soils at the Site is considered to be a "Sensitive Site" as per O. Reg. 153/04, Section 41; 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 and grain size analysis 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;
- 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 1 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[1]	Location of PCA	COPC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 1 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	<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. Four (4) soil samples and one (1) duplicate were submitted for PHCs, BTEX, and VOCs. <u>Groundwater:</u> ***Round 1:*** Three (3) groundwater samples (BH2-23, BH5-23, and BH4) and one (1) duplicate sample	<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. <u>Groundwater:</u> Exceedances of metals (cobalt, uranium, vanadium) were identified at BH2-23, screened at 4.42 - 7.47, BH5-23, screened at 5.33 - 6.85 mbgs, respectively. (cobalt, uranium and vanadium) at BH2-23, BH5-23, BH3, and BH7.

APEC	Location of APEC on Phase Two Property	PCA[1]	Location of PCA	COPC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 1 SCS)
					(BH5-23-0) were submitted for PHCs, BTEX, VOCs, PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN-, Hg. ***Round 2:*** 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-, 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. ***Round 3:*** 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.	
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	<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.	<u>Soil:</u> Exceedances of EC was identified at BH5 at 0.0 - 0.61 mbgs. This was vertically delineated to 6.09 mbgs.
APEC 2B:	Northern	PCA 2B: #Other	On-Site	Soil: EC, SAR	<u>Soil:</u>	<u>Soil:</u>

APEC	Location of APEC on Phase Two Property	PCA[1]	Location of PCA	COPC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 1 SCS)
Salting activities in winter months	portion of the Site	– De-icing Activities			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.	Exceedances of EC was identified at BH5 at 0.0 - 0.61 mbgs. This was vertically delineated to 6.09 mbgs.
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	<u>Soil:</u> Two (2) soil samples were submitted for PHCs, BTEX, and VOCs. One (1) soil sample was submitted for Metals, Sb, As, Se. <u>Groundwater:</u> ***Round 1:*** Two (2) groundwater samples (BH4, BH1-23) was submitted for PHCs, BTEX, VOCs, and Metals, Sb, As, Se. ***Round 2:*** November: One (1) groundwater sample (BH4) was submitted for PHCs, BTEX. ***Round 3:*** One (1) groundwater sample (BH4) and one (1) duplicate (BH4-0) were submitted for PHCs, BTEX.	<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. <u>Groundwater:</u> No exceedances were identified in groundwater samples.
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	Location of APEC on Phase Two Property	PCA[1]	Location of PCA	COPC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 1 SCS)
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	Soil: Two (2) soil samples were submitted for PHCs, BTEX and VOCs. One (1) soil sample was submitted for PAHs, Metals, Sb, As, Se, HWS-B, Cr(VI), CN, Hg Groundwater: ***Round 1:*** No groundwater sample was obtained at BH3 given that it was dry during the investigation(s). ***Round 2:*** One (1) groundwater sample (BH3) was submitted for PHCs, BTEX, VOCs, and Metals, Sb, As, Se. ***Round 3:*** One (1) groundwater sample (BH3) was submitted for Metals, Sb, As, Se.	Soil: No exceedances were identified in the soil samples. Groundwater: Exceedances for uranium were identified at BH3, with a well screened at 4.57 - 7.62.

(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

Soil was within the Table 1 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_{ESA}'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.

3.4 Groundwater COCs

Groundwater was within the Table 1 SCS for all parameters analyzed, with the exception of metals (cobalt, uranium and vanadium) at BH2-23, BH5-23, BH3, and BH7. These metal exceedances have not been vertically delineated

Metal exceedances were identified in the vicinity of the equipment and marine vehicle repair shop, as shown in Figure 17. Groundwater impacts have not been fully vertically or horizontally delineated.

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 1 SCS, if applicable, are shown on Figures 7, 14, and 17.

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
Associated with APEC 1	Southwestern portion of the Site	Metals (cobalt and vanadium)	Groundwater
N/A – Background conditions	Southern portion of the Site	Uranium	Groundwater
Associated with APEC 3	South-central portion of Site	PHC Fraction F2	Soil

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.

The metal exceedances (cobalt and vanadium) identified in groundwater at monitoring well BH5-23 are likely associated with the equipment and marine vehicle repair shop (APEC 1). Uranium exceedances identified in groundwater at monitoring wells BH3, BH7, BH2-23, and BH5-23 are likely associated with background conditions, representative of the bedrock and soil type in the vicinity of the Site.

3.7 Migration of Contaminants

The preferential pathways for contaminants present in soil and groundwater media, include various underground utilities, building footings and subsurface features.

Underground utilities were identified at the Site. As such, there is a potential for underground utilities to affect the distribution and transport of groundwater and soil vapour contaminants located on the Site.

Details on the preferential pathways for the impacts are summarized in Table 7.

Table 7: Preferential Pathways

Anything known about migration of the contaminants present on, in or under the phase two property at a concentration greater than the applicable site condition standard away from any area of potential environmental concern, including the identification of any preferential pathways.	Current utilities may affect groundwater and soil vapour migration. Future utilities may affect groundwater and soil vapour migration. Current and future building footings may affect groundwater and soil vapour migration.

3.8 Climatic and Meteorological Conditions Affecting Migration

Given the presence of volatile COCs in soil, vapour intrusion is a potential contaminant transport mechanism for volatile COCs in soil. Intrusion of vapour-phase contaminants into the indoor air occurs from volatilization of chemicals from the dissolved or non-aqueous phases in the subsurface.

The relevant mechanisms for vapour intrusion are soil gas advection and vapour migration from diffusion through the building foundation. Soil gas advection is the dominant mechanism when the pressure gradient is greater than 1 Pascal (MECP 2011b), as is the case in many residential buildings due to building depressurization. Soil gas advection can occur through any unsealed entry points, cracks or openings present in the building foundation.

Soil vapour flow is greatest within 1 m to 2 m below the building foundation (MECP 2011b); as such, the soil permeability of backfill beneath the building foundation will affect the soil vapour flow rate. Furthermore, pressure gradients (i.e. depressurization of the indoor airspace of the building) created by temperature differences between indoor and outdoor air may affect soil gas flow rate by creating a "stack effect" where, as warm air rises, it is replaced by air infiltrating through doors and windows, and soil gas migrating through the foundation.

As such, in the event that the vapour intrusion pathway is present there may be potential for unacceptable health risks to building occupants via inhalation of indoor air.

3.9 Soil Vapour Intrusion

Given the presence of PHC fraction F2 in soil at BH4-SS3 (depth of 1.52 to 2.13 mbgs) soil vapour intrusion pathways are considered possible in the existing and future Site buildings.

Existing Site Buildings

Construction Features

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. Drains were observed in the garage building. There were no other drains, pits, or sumps observed during the Phase One ESA Site visit.

Heating, Ventilating and Air Conditioning Systems

At the time of the Phase One ESA Site visit, both buildings utilized natural gas heating with additional electric baseboard heaters noted in the office portion of the garage structure. Evidence of oil tank fill and vent pipes were observed on the north side of

the residential house (1544 Four Mile Creek Road) next to the current natural gas meter. Window/wall mounted air conditioning units were observed at both structures.

Utilities

Natural gas is currently supplied by Enbridge. Hydro was supplied by Niagara-on-the-Lake Hydro Inc. Natural gas is supplied underground and hydro is supplied both overhead and underground.

The buildings were all serviced by municipal water and sewers. The Town of Niagara-on-the-Lake obtains its potable water from Lake Erie.

Additional details of subsurface structures and utilities are discussed in Section 1.3.

Future Site Buildings

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 it proposed for the central portion of the Site, between the two proposed building structures.

As volatile soil COCs were identified, vapour intrusion pathways are considered complete and there is potential for vapour intrusion under current Site conditions and upon redevelopment in the future Site buildings. To mitigate potential vapour intrusion, for the current Site conditions and future Site buildings, risk management measures or remedial measures are recommended.

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 it 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 and groundwater COCs identified at the Site, possible routes of exposure for human receptors include 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 and groundwater 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;
- 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; and,
- Direct exposure to groundwater through dermal contact and incidental ingestion by 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 include 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;
- Direct exposure to groundwater through dermal contact and incidental ingestion by off-Site construction/subsurface utility workers;
- Indirect contact to soil and groundwater COCs via 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 and groundwater COCs via ingestion of fish by off-Site recreational visitors and trespassers; and,
- Indirect contact to soil and groundwater COCs via dermal contact and incidental ingestion of sediment by off-Site recreational visitors and trespassers, and off-Site outdoor maintenance workers.

The potential exposure routes for on- and off-Site human receptors are summarized in Figure 22.

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 and groundwater COCs identified at the Site, possible routes of exposure for on-Site ecological receptors include the following (as shown in Figure 23):

- Direct exposure to soil COCs through dermal contact, incidental ingestion, and/or particulate inhalation by soil invertebrates and terrestrial wildlife;
- Direct exposure to soil and groundwater 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 include the following (as shown in Figure 23):

- 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 groundwater COCs through root uptake by terrestrial plants;
- 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.

The potential exposure routes for on- and off-Site ecological receptors are summarized in Figure 23.

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

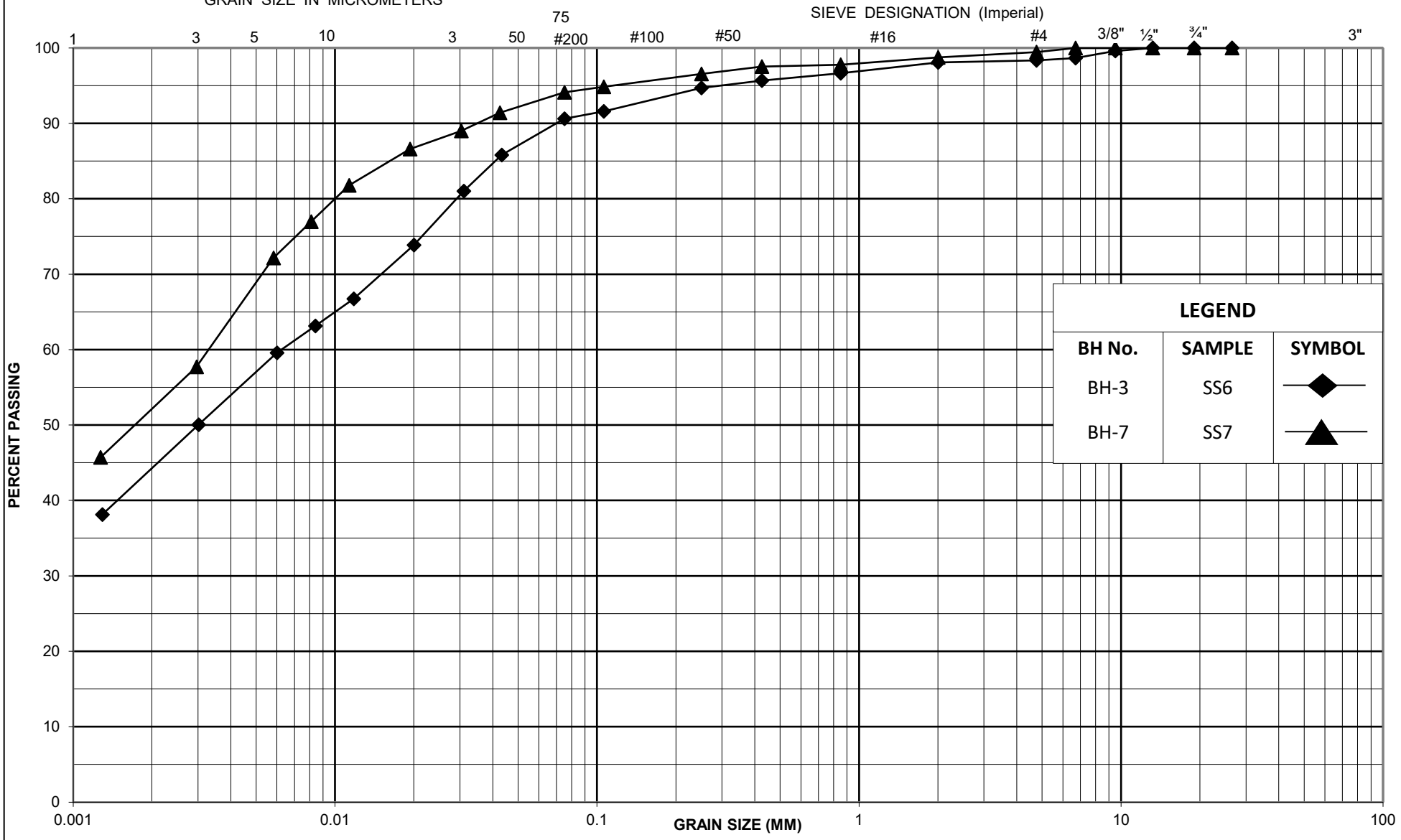
- Atlas of Canada Topographic Map (also known as Toporama) found on the Natural Resources Canada website at http://atlas.nrcan.gc.ca/site/english/maps/topo/map
- Brennand, T.A., Moore, A., Logan, C., Kenny, F., Russell, H.A.J., Sharpe, D.R. and Barnett, P.J., *Bedrock Topography of the Greater Toronto & 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.
- 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).
- 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.

Appendix I – Grain Size Analysis

ISSMFE SOIL CLASSIFICATION SYSTEM

CLAY	SILT			SAND			GRAVEL			Cobbles
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	



GRAIN SIZE DISTRIBUTION

DRAWING NO.:	B1
PROJECT NO.:	HAM-24000672-A0
DATE:	JANUARY 2025