PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
159 CONFEDERATION STREET, HALTON HILLS, ONTARIO

Prepared For:

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1.0 EXECUTIVE SUMMARY

Sirati and Partners Consultants Ltd. (SIRATI) was retained by Weston Consulting (hereinafter referred to as the 'Client') to conduct a Phase Two Environmental Site Assessment (Phase Two ESA) at 159 Confederation Street, Halton Hills, Ontario (hereinafter referred to as the "Phase Two Property" or the "Site").

The Phase Two ESA was conducted in accordance with the Phase Two ESA Standard as defined by Ontario Regulation (O. Reg.) 153/04, as amended, and is intended to support the filing of a Record of Site Condition (RSC) for the Site.

The Phase Two Property is located on the east side of Confederation Street and approximately 300 m northwest of Mountain Street, in Halton Hills, Ontario. The total area of the Phase Two Property is approximately 122,647 m^2 (12.2647 hectares) according to J. D. Barners (Surveyor), October 31, 2023. The Phase Two Property is currently undeveloped and covered with wooded areas, and a shed was observed during the site reconnaissance. A credit river is located approximately 35 m east-northeast of the Phase Two Property. Phase Two Property is planned to be transformed into a housing community with a residential subdivision.

The Phase Two Property is bounded by Residential buildings and a Wooded area to the north and south, Residential buildings and credit river to the east, and Confederation Street followed by Farmland and residential properties to the west. The Phase One Study Area consists of farmland with rural residential buildings within a radius of 250 meters from the Phase One Property boundaries. This 250 m radius extends roughly to farmland to the west.

Based on available physiography, geology, and topography information, the Site is located in an area with physiography of spillways with surficial geology of Glaciofluvial deposits which are river deposits and delta topset facies with Gravelly deposits, Modern alluvial deposits which are clay, silt, sand, gravel, may contain organic remains, and Till which is Clay to silt-textured till (derived from glaciolacustrine deposits or shale), (sand and gravel pit), over a bedrock of shale, limestone, dolostone, and siltstone, Queenston formation. Bedrock in the area is anticipated to be covered with 7 m to 24 m of drift.

According to the topographic maps, the inferred groundwater flow direction in the area is likely to the east-northeast in a similar manner as the topography of the area.

The interactive natural heritage area map, published by the Ministry of Natural Resources and Forestry (MNRF) (2023), indicates areas of natural significance within the Site. A wetland of provincial significance was indicated on the wooded lands approximately 380 m northeast of the Phase Two Property. Credit River is flowing approximately 35 m east-northeast of the Phase Two Property.

As part of the Phase One ESA conducted at the Site by SIRATI on January 22, 2024 (SIRATI 2024 Phase One ESA), a Phase One Conceptual Site Model (CSM) was prepared for the Site, including Drawings depicting the potentially contaminating activities (PCAs) and the areas of potential environmental concern (APECs) on the Site.

A total of three (4) PCAs were identified within the Site. Two (2) of these PCAs are considered to be APECs for the Site. The PCAs and APECs are summarized in the Table 1 and Table 2, respectively, below:

Table 1: PCAs Identified within the Phase One Study Area

Potentially Contaminating Activity	Location of PCA			Source of Information	Considered an APEC	Potentially Impacted Media (Ground Water, Soil and/or Sediment)
	On-site or off-site	Up-gradient (Y/N)	Proximity to Site			
PCA-1 #30 – Importation of Fill Material of Unknown Quality. Fill material was brought to the site to backfill a pit after excavation for aggregate resources.	On-Site	N/A	N/A	Fill or Debris from site visit (4.3.3) Phase One ESA Report	Yes	Soil and Groundwater
PCA-2 #Other – Historical Industrial Use (Sand and Gravel Pit, Concrete block plant) The Site is being used for the excavation of aggregate resources.	On-Site	N/A	N/A	Aerial Photographs (4.3.1) Phase One ESA Report	Yes.	Soil and Groundwater
PCA-3 #Other – Spill Pipe/Hsoe leak incident reported.	Off-Site	No	117 m Northwest Portion of the Phase One Property	ERIS report (4.2) Phase One ESA Report	No	N/A
PCA-4 #40 – Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications. The pesticide operator is registered.	Off-Site	No	115 m Northeast portion of the Phase One property	ERIS report (4.2) Phase One ESA Report	No	N/A

Table 2: APECs Identified on the Phase One Property

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on the Phase One Property	Potentially Contaminating Activity	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC-1 Imported fill material of unknown quality to back fill pit after excavation at the Site.	Entire Site	#30 – Importation of Fill Material of Unknown Quality	On-Site	M&I, PHCs, VOCs, PAHs, and PCBs	Soil and Groundwater

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on the Phase One Property	Potentially Contaminating Activity	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC-2 Historical use for the extraction of aggregate resources	Northwest and south portion	#Other – Historical Industrial Use (Sand and Gravel Pit, Concrete block plant)	On-Site	M&I, PHCs, BTEX.	Soil and Groundwater

Notes: PHCs – Petroleum Hydrocarbons Fractions 1 to 4 (F1-F4)
PAHs – Polycyclic Aromatic Hydrocarbons
VOCs – Volatile Organic Compounds
PCBs – Polychlorinated Biphenyls
BTEX – Benzene, Toluene, Ethylbenzene, and Xylenes
M&I - Metals (Ba, Be, B, Cd, Cr, Co, Cu, Pb, Mo, Ni, Ag, Tl, U, V and Zn), Hydride forming metals (Sb, As, Se), as well as Na and Other Regulated Parameters (B-HWS, Cl-, CN-, Electric Conductivity, Cr-VI, Hg, Low or high pH, SAR) as per O. Reg 153/04 Analytical Method, amended July 1, 2011.

Based on the information obtained, from the 2024 Phase One ESA study report, SIRATI recommended conducting a Phase Two ESA at the Site to further evaluate the above noted APECs.

This Phase Two ESA study was conducted to address the APECs identified on the Phase One Property and listed in the above table.

The field investigations for the Phase Two ESA were conducted between June 19 and 21, 2024. These investigations involved drilling four boreholes (BH/MW-101, BH/MW-102, BH/MW-103, and BH/MW-104) to a maximum depth of 9.3 meters below ground surface (mbgs). Additionally, six (6) soil samples were taken using a hand auger to a maximum depth of 1 meter below ground surface (mbgs).

Four (4) monitoring wells (BH/MW-101, BH/MW-102, BH/MW-103, and BH/MW-104) were installed in the newly drilled boreholes at the Site for groundwater observation, sampling, and testing.

Fill material and topsoil were encountered at the ground surface at the borehole locations. The general stratigraphy at the Phase Two Property, as observed in the boreholes, generally consisted of silty sand to silty sand till below the fill and topsoil material. The final depth of the native till deposit was not determined as the boreholes were terminated within this layer at a maximum depth of 9.3 mbgs.

Based on the groundwater elevation data obtained on July 04, 2024, the inferred groundwater flow direction is determined to the southeast. Based on the groundwater measurements, the calculated horizontal hydraulic gradient for the investigated aquifer at the Phase Two Property were 0.0015 m/m, 0.02597 m/m and 0.0174 m/m (average 0.0150 m/m). The vertical hydraulic gradient was not calculated as the second aquifer was not encountered at the depths investigated during this Phase Two ESA study.

Based on visual inspection, it was identified that no free product or oily sheen was observed in any of the monitoring wells.

Soil and groundwater samples, including duplicate samples and QA/QC samples, were submitted to AGAT Laboratories for analysis of one or more of the following contaminants of potential concern (COCs): petroleum hydrocarbons Fractions 1 to 4 (PHCs) including benzene, toluene, ethylbenzene and Xylenes (BTEX), volatile

organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), and metals and inorganic (M&I) parameters [(As, Sb, Se, Na, B-HWS, Cl-, CN-, Cr-VI, Hg, low or high pH, electrical conductivity (EC) and sodium adsorption ratio (SAR)].

For assessment purposes, SIRATI selected the Ontario Ministry of the Environment, Conservation and Parks (MECP) 2011 Table 9: Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition for residential/parkland/institutional/Industrial/Commercial/Community property use with coarse-textured soils (MECP Table 9 Standards).

A review of the soil and groundwater sample analytical results during the investigation indicated that the concentration of the tested parameter in the soil and groundwater samples meets the MECP Table 9 Standards except TCE in water for BH/MW-04.

Based on the information of the Phase Two ESA, SIRATI is of the opinion that the Phase Two Property is in exceeding MECP Table 9 Standards for groundwater in one Monitoring well and as such, confirmatory groundwater sampling is recommended.

The statements made in this Executive Summary are subject to the same limitations as contained in the report and should be read in conjunction with the entire report.

2.0 INTRODUCTION

Sirati and Partners Consultants Ltd. (SIRATI) was retained by Weston Consulting (hereinafter referred to as the 'Client') to conduct a Phase Two Environmental Site Assessment (Phase Two ESA) for the property located at 159 Confederation Street, Halton Hills, Ontario (hereinafter referred to as the "Phase Two Property" or the "Site").

The assessment consisted of a program of drilling, monitoring well installations, soil and groundwater sampling and testing, and evaluation of analytical results that characterized the subsurface conditions beneath the Phase Two Property to establish any environmental contamination affecting the Phase Two Property. The Phase Two ESA was conducted in accordance with the Phase Two ESA Standard as defined by Ontario Regulation (O. Reg.) 153/04, as amended.

Conditions noted in this report are general in nature. This report presents the results of the investigation and the conclusions we have drawn regarding the possible impact of the conditions observed.

2.1 Objective

The purpose of this Phase Two ESA was to investigate soil and groundwater quality at the Phase Two Property in accordance with the procedures and requirements of O. Reg. 153/04, as amended, to support the filing of a Record of Site Condition (RSC) for the Site.

2.2 Site Description

The Phase Two Property is located at on the east side of Confederation Street, approximately 300 m northwest of Mountain Street, in Halton Hills, Ontario. A survey plan of the Phase Two Property is provided in Appendix A. A Plan showing the location and boundaries of the Phase Two Property is in Figure 1.

The Phase Two Property is a piece of land measuring approximately 122,647 m² (12.2647 hectares), according to the survey prepared by J.D. Barnes Limited. The information for the Phase Two Property including the legal description, property identification number (PIN), zoning, and Universal Transverse Mercator zone 17 (UTM) coordinates are presented in Table 3.

Table 3: Phase Two Property information

Municipal Address	Legal Description	PIN	UTM Coordinates - Centre Point of the Site
159 Confederation Street, Halton Hills, Ontario	LT 26, RCP 1555 , EXCEPT PT 2 & 3, 20R8779 ; S/T 242783, 701169 ; HALTON HILLS	25011-0064 (LT)	Easting: 586026.09 m E Northing: 4836349.71 m N

2.3 Property Ownership

At the time of the Phase Two ESA, the Phase Two Property was owned by Eden Oak (Bayfield) Inc. The contact information is as follows:

Company Name: Eden Oak (Bayfield) Inc.
Owner Name: Romas Kartavicus

Company Name:	Weston Consulting
Company Address:	201 Millway Ave #19, Concord, Ontario
Contact Name:	Joey Au Yeung
Contact Telephone:	647 300 0030
Contact email:	jauyeung@westonconsulting.com

2.4 Current and Proposed Future Use

A historic Map dated 1858 indicates that the Phase Two Property was undeveloped. Aerial Photographs dated 1997 to 2017 indicate that the surface of the Phase Two Property had been disturbed, likely due to excavation of aggregate resources. At the time of writing this report, the Phase Two Property was covered with pasture hay crops. SIRATI understands that there is a proposal to develop the Phase Two Property with a 2-storey residential building with a single-level basement.

2.5 Applicable Site Condition Standards

Ontario Regulation 153/04 - Record of Site Condition, Part XV.1 of the Environmental Protection Act as amended - "O. Reg. 153/04, as amended" - establishes the legislative and regulatory requirements for contaminated sites in Ontario. The Ministry of the Environment, Conservation and Parks (MECP) document "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act," dated April 15, 2011, sets out the prescribed contaminants and applicable Site Condition Standards (SCS) for those contaminants for the purposes of O. Reg. 153/04, as amended. The MECP SCS are set out in Tables 1 to 9 criteria applicable for various site conditions.

The selection of the appropriate MECP SCS for a Phase Two ESA is dependent upon several site-specific conditions, such as the existing/proposed property use, the existing/potential groundwater use, the depth of clean-up, soil texture, depth to bedrock and proximity to the nearest body of water or areas of natural significance.

The MECP SCS applicable to the Phase Two Property has been evaluated on the basis of the following rationale:

- The proposed future use of the Phase Two Property is residential.
- The Phase Two Property is located in an area of the Town of Halton Hills which is serviced by the municipal water supply. As such, groundwater is not expected to be used as a source of potable water.
- Based on the observed heterogeneity of the subsurface, SIRATI qualified person (QP) is of the opinion that coarse-textured soil standards are the appropriate standards to assess the Phase Two Property.
- A search of the Areas of Natural and Scientific Interest (ANSI) map (2023), published by the Ministry of Natural Resources and Forestry (MNRF), identified areas of natural significance at the Phase Two Property. Credit River is located approximately 35 m east-northeast of the Site and flows in a southern direction. A wetland of provincial significance was indicated on the wooded lands approximately 380 m northeast of the Property. Two tributaries (creek) of the Credit River flow in the northeast direction across the Site, were identified based on the topographic map.
- The pH values of soil samples collected from surface soil for depths less than 1.5 mbgs ranged from 6.74 (BH-04-GS-02) to 6.99 (BH-02-GS-01). and for subsurface soil for depths greater than 1.5 mbgs ranged

from 7.56 to 7.68. These values were within the acceptable ranges of 5 to 9 for surface soil, and 5 to 11 for subsurface soil.

- Borehole investigations identified that the Phase Two Property is not in an area of shallow soil, as the bedrock was not encountered within 2.0 mbgs during the investigation; and
- There is no intention to carry out a stratified restoration at the Site.
- The proposed site will be supported by the municipal water supply system. The client intends to apply non-potable groundwater Site Condition Standards for this assessment at the Phase Two Property.

Based on the above-noted characterization of the Phase Two Property, the MECP Table 9 Full Depth Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition for residential/parkland/institutional/Industrial/Commercial/Community property use with coarse-textured soils were selected to be applicable for assessing the soil and groundwater quality at the Phase Two Property (MECP Table 9 Standards).

3.0 BACKGROUND INFORMATION

The environmental investigations for this Phase Two ESA conducted at the Site and the details of findings are outlined in Section 3.2. The Phase Two ESA was conducted at the Phase Two Property to address the APECs identified in SIRATI's Phase One ESA conducted in 2024. The Phase One ESA Conceptual Site Model Plan showing the PCAs presented in Figure 2 and APECs is presented on Figure 3.

3.1 Physical Setting

3.1.1 Water Bodies

A credit river is located approximately 35 m east-northeast of the Phase One Property and flows in a southern direction. Two tributaries (creek) of the Credit River flow in the northeast direction across the Phase One property were identified based on the topographic map.

3.1.2 Areas of Natural Significance

A review of the interactive natural heritage area map published by the Ministry of Natural Resources and Forestry (MNRF) (2013) identified areas of natural significance within the Phase One Study Area. A credit river is located approximately 35 m east-northeast of the Site and flows in a southern direction. A wetland of provincial significance was indicated on the wooded lands approximately 380 m northeast of the Phase One Property. Two tributaries (creek) of the Credit River flow in the northeast direction across the Phase Two property were identified based on the topographic map.

3.1.3 Topography and Surface Water Drainage Features on the Phase Two Property

According to the topographic maps, the inferred groundwater flow direction in the area is likely to the northeast in a similar manner as the topography of the area.

3.1.4 Well-head Protection Areas or Other Municipal Designated Protection of Ground Water

Based on the Source Protection Information Atlas of the MECCP, the Phase Two Property is located in the Credit Valley Source Protection Areas. The Phase Two Property is not located within a wellhead Protection Area.

3.1.5 Properties Within the Phase One Study Area Served by Municipal Drinking Water System

Based on the reviewed information, no drinking water wells are located on the Phase Two Property.

3.1.6 Presence of Any Well for Human Consumption or an Agricultural use, Where all properties in the Phase One Study Area are served by Municipal Drinking Water System

The "Water Well Information System" (WWIS) is a provincial database that covers well records data till 2023. The database describes the locations and characteristics of water wells found in Ontario in accordance with Ontario Regulation 903. A search of the WWIS database through the EcoLog ERIS report and the MECP online database has identified nine (9) listings of wells on Site and seventy-seven (77) well records within the Phase One Study Area.

3.2 Past Investigations

No previous environmental report was provided to SIRATI for review.

4.0 SCOPE OF INVESTIGATION

To conduct Phase Two ESA in order to determine the locations and concentration of one or more contaminants in soil and/or water on, in or under the Phase Two Property in accordance with the O. Reg. 153/04, as amended, and subject to the limitations outlined in Section **Error! Reference source not found.** of this report.

The field work for this Phase Two ESA followed the procedures outlined in the Sampling and Analysis Plan (SAP) included in Appendix B.

4.1 Overview of Site Investigation

To address the APECs identified in the SIRATI's 2024 Phase One ESA report, SIRATI conducted this Phase Two ESA consisting of drilling boreholes, installing monitoring wells, soil sampling, and testing of soil and groundwater samples during this investigations.

The field investigations for the Phase Two ESA were conducted between June 19 and 21, 2024. These investigations involved drilling four boreholes (BH/MW-101, BH/MW-102, BH/MW-103, and BH/MW-104) to a maximum depth of 8.1 meters below ground surface (mbgs). Additionally, six (6) samples were taken using a hand auger to a maximum depth of 1 meter below ground surface (mbgs).

Four (4) monitoring wells (BH/MW-101, BH/MW-102, BH/MW-103, and BH/MW-104) were installed on the Site for groundwater observation, sampling, and testing. Soil and groundwater samples were collected from boreholes/monitoring wells and analyzed for one or more of the following parameters: PHCs, BTEX, VOCs, PAHs, PCBs, and M&I.

The approximate locations of the boreholes/monitoring wells are shown in Figure 4. The rationale for the selection of borehole/monitoring well locations is shown in the table below:

Table 4: Borehole/Monitoring Well Rationale

Area of Potential Environmental Concern	Location on Site	Borehole/MW ID
(1) Imported fill material of unknown quality to back fill pit after excavation at the Site	Entire Site	BH/MW-101, BH/MW-102, BH/MW-103, BH/MW-104, BH-105, BH-106, BH-107, BH-108, BH-109, and BH-110.
(2) Historical use for the extraction of aggregate resources.	Northwest and south portion	BH/MW-102, BH/MW-103, and BH/MW-104

The scope of work for this Phase Two ESA included, but was not limited to the following tasks:

- Planning a site investigation through the preparation of a Sampling and Analysis Plan (refer to Appendix B);
- Utility Locates: Prior to the advancement of the boreholes, arrange for the location of underground and overhead utilities including electrical (hydro), natural gas, water supply, sanitary and storm sewer, telephone, cable and communication. Underground utilities to be marked by local utility locates company representatives, and a private locator to retain to clear the borehole locations prior to the drilling of the boreholes;
- Drill and collect soil samples at ten (10) borehole locations (BH/MW-101, BH/MW-102, BH/MW-103, BH/MW-104, BH-105, BH-106, BH-107, BH-108, BH-109, and BH-110), logged and field screened

the soil samples through visual inspection and field measurement of total organic vapors (TOV) of the soil samples, and the selection of soil samples for laboratory analysis;

- Install monitoring wells in four (4) of the boreholes (BH/MW-101, BH/MW-102, BH/MW-103 and BH/MW-104);
- Develop the monitoring wells, purged and collected groundwater samples for laboratory analysis;
- Submit soil and groundwater samples under the Chain of Custody protocol to the accredited laboratories to carry out chemical analyses for contaminants of potential concern (COCs) in accordance with O. Reg. 153/04 - "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act" published by the MOE and dated March 9, 2004, as amended by O. Reg. 511/09, s. 22 ("Analytical Protocol");
- Review and interpret laboratory results of chemical analysis data and observations made during the site investigations;
- Complete an evaluation of the information from the above and prepare a Phase Two Conceptual Site Model (CSM) to identify locations and concentrations of contaminants (if any) above the applicable Site Condition Standards at the Site; and
- Prepare a Phase Two ESA report of the investigation findings, conclusions, and recommendations.

4.2 Media Investigated

The media to investigate for the Phase Two ESA includes soil and groundwater at the Site. Credit river flows approximately 35 m east-northeast of the Site, there was no surface water body on the Site, as such no sediment sampling will be required to be conducted for this Site.

Soil and groundwater samples will be collected for chemical analysis to determine whether any COCs are present in the soil and groundwater in the locations of the APECs outlined in the SIRATI 2024 Phase One ESA report.

4.3 Phase One Conceptual Site Model

This Phase One Conceptual Site Model is prepared as part of a Phase One Environmental Site Assessment (Phase One ESA) for a portion of a property located at 159 Confederation Street, Halton Hills, Ontario the "Site"). The Site Plan is presented in Figure 1.

Based on the records review, the Phase One Property was undeveloped since 1858. There is no indication of any previous development within the Phase One Property. Based on the historical aerial photos from 1946 to 1960 an open aggregate resource pit was observed. At the time of the Site reconnaissance, the Phase One Property was covered with wooded areas, and a shed was observed. A credit river is located approximately 35 m east-northeast of the Phase One Property and flows in a southern direction. Two tributaries (creek) of the Credit River flow in the northeast direction across the Phase One property were identified based on the topographic map.

The Phase One Property is located on the east side of Confederation Street and approximately 300 m northwest of Mountain Street in Halton Hills, Ontario. The total area of the Phase One Property is approximately 122,647 sq.m. (12.2647 ha) according to J. D. Barners (Surveyor. The information for the Phase One Property including the legal description, Property identification number (PIN), zoning, and Universal Transverse Mercator zone 17

(UTM) coordinates are presented below.

Municipal Address	Legal Description	PIN	UTM Coordinates - Centre Point of the Site
159 Confederation Street, Halton Hills, Ontario	LT 26, RCP 1555 , EXCEPT PT 2 & 3, 20R8779 ; S/T 242783, 701169 ; HALTON HILLS	25011-0064 (LT)	Easting: 586026.09 m E Northing: 4836349.71 m N

The Phase One Property is surrounded by the following properties:

North: Residential buildings and Wooded area
East: Residential buildings and credit river
South: Residential buildings
West: Confederation Street followed by Farmland and residential properties.

The Phase One Study Area consists of farmland and residential buildings within a radius of 250 meters from the Phase One Property boundaries.

4.3.1 Any Existing Buildings and Structures

There is no existing buildings or building structures at the subject Property.

4.3.2 Water Bodies Located within the Phase One Study Area

A credit river is located approximately 35 m east-northeast of the Phase One Property. Two tributaries of the Credit River flow in the northeast direction across the Phase One property were identified based on the topographic map.

4.3.3 Areas of Natural Significance Located within the Phase One Study Area

A review of the interactive natural heritage area map published by the Ministry of Natural Resources and Forestry (MNRF) (2023) identified areas of natural significance within the Phase One Study Area. A credit river is located approximately 35 m east-northeast of the Phase One Property and flows in a southern direction. A wetland of provincial significance was indicated on the wooded lands approximately 380 m northeast of the Phase One Property. Two tributaries (creek) of the Credit River flow in the northeast direction across the Phase One property were identified based on the topographic map.

4.3.4 Drinking Water Wells Located at the Phase One Property

No water well was observed on the Site, during our site reconnaissance.

4.3.5 Roads within the Phase One Study Area

The Phase One Property is located on the east side of Confederation Street and approximately 300 m northwest of Mountain Street, in Halton Hills, Ontario. The Phase One Study Area consists of farmland and residential buildings within a radius of 250 meters from the Phase One Property boundaries. This 250 m radius extends roughly to farmland to the west.

The roadways within the Phase One Study are presented in Figure 1.

4.3.6 Uses of Properties Adjacent to the Phase One Property

The Phase One Property is surrounded by the following properties:

North Residential buildings and Wooded area
East Residential buildings and credit river
South Residential buildings
West Confederation Street followed by Farmland and residential properties.

4.3.7 Identify and Locate Areas Where any Potentially Contaminating Activity Has Occurred

Potentially Contaminating Activities (PCAs) were identified at the Phase One Property and other properties within the Phase One Study Area based on the records review, interviews, and Site reconnaissance. The PCAs identified are listed in the Table below.

Potentially Contaminating Activity	Location of PCA			Source of Information	Considered an APEC	Potentially Impacted Media (Ground Water, Soil and/or Sediment)
	On-site or off-site	Up-gradient (Y/N)	Proximity to Site			
PCA-1 #30 – Importation of Fill Material of Unknown Quality. Fill material was brought to the site to backfill a pit after excavation for aggregate resources.	On-Site	N/A	N/A	Fill or Debris from site visit (4.3.3) Phase One ESA Report	Yes	Soil and Groundwater
PCA-2 #Other – Historical Industrial Use (Sand and Gravel Pit, Concrete block plant) The Site is being used for the excavation of aggregate resources.	On-Site	N/A	N/A	Aerial Photographs (4.3.1) Phase One ESA Report	Yes.	Soil and Groundwater
PCA-3 #Other – Spill Pipe/Hsoe leak incident reported.	Off-Site	No	117 m Northwest Portion of the Phase One Property	ERIS report (4.2) Phase One ESA Report	No	N/A
PCA-4 #40 – Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications. The pesticide operator is registered.	Off-Site	No	115 m Northeast portion of the Phase One property	ERIS report (4.2) Phase One ESA Report	No	N/A

The locations of PCAs are shown on Figure 2.

4.3.8 Identify and Locate any Areas of Potential Environmental Concern

The Areas of Potential Environmental Concern (APECs) identified at the Phase One Property that may have resulted from the PCAs identified within the Phase One Study Area are presented in the Table below.

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on the Phase One Property	Potentially Contaminating Activity	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC-1 Imported fill material of unknown quality to back fill pit after excavation at the Site.	Entire Site	#30 – Importation of Fill Material of Unknown Quality	On-Site	M&I, PHCs, VOCs, PAHs, and PCBs	Soil and Groundwater
APEC-2 Historical use for the extraction of aggregate resources	Northwest and south portion	#Other – Historical Industrial Use (Sand and Gravel Pit, Concrete block plant)	On-Site	M&I, PHCs, BTEX.	Soil and Groundwater

Notes: PHCs – Petroleum Hydrocarbons Fractions 1 to 4 (F1-F4)
PAHs – Polycyclic Aromatic Hydrocarbons
VOCs – Volatile Organic Compounds
PCBs – Polychlorinated Biphenyls
BTEX – Benzene, Toluene, Ethylbenzene, and Xylenes
M&I - Metals (Ba, Be, B, Cd, Cr, Co, Cu, Pb, Mo, Ni, Ag, Tl, U, V and Zn), Hydride forming metals (Sb, As, Se), as well as Na and Other Regulated Parameters (B-HWS, Cl-, CN-, Electric Conductivity, Cr-VI, Hg, Low or high pH, SAR) as per O. Reg 153/04 Analytical Method, amended July 1, 2011.

The locations of APECs are shown on Figure 3.

4.3.9 Potential Underground Utilities to Affect Contaminant Distribution and Transport

At the time of the assessment, the Site was an undeveloped vacant, and wooded area. No subsurface structures or underground utilities were observed or expected at the Phase One Property.

4.3.10 Regional or Site Specific Geological and Hydrological Information

The Phase One Property is located in an area with physiography of spillways with a surficial geology of Glaciofluvial deposits which is river deposits and delta topset facies with Gravelly deposits, Modern alluvial deposits which are clay, silt, sand, gravel, may contain organic remains, and Till which is Clay to silt-textured till (derived from glaciolacustrine deposits or shale), over bedrock of shale, limestone, dolostone and siltstone, Queenston formation. Bedrock in the area is anticipated to be covered with 7 m to 24 m of drift.

The Phase One Property is located within the larger hydrogeological region known as the Southern Ontario Lowlands. A watershed map provided by Credit Valley Conservation (CVC) shows that the Phase One Property is situated within the Credit Valley River watershed.

The ground surface at the Phase One Property is uneven. Shallow groundwater flow in the area is expected to be in an east-northeast direction, towards the credit river approximately 35 m east-northeast of the Phase One Property.

4.3.11 Any Uncertainty or Absence of Information Obtained Could Affect the Validity of the Model

No uncertainty or absence of information noted in the Phase One ESA could affect the validity of this conceptual site model.

4.4 Deviations from the Sampling and Analysis Plan

The field investigative and sampling program was carried out following the requirements of the SAP.

4.5 Impediments

The Phase One Property was accessible at the time of the investigations and no physical impediments were encountered during the field investigations.

5.0 INVESTIGATION METHOD

5.1 General

This section of the report describes the various investigation methods used in the Phase Two ESA, including drilling, soil sampling, monitoring well installation, groundwater sampling, analytical testing, and remediation activities.

All fieldwork was conducted in accordance with the SAP in Appendix B.

Prior to initiating the drilling program, SIRATI arranged for underground utility locates. Private locates, including telephone, natural gas, and electrical lines were completed by All Clear Locates under the supervision of SIRATI personnel. Each borehole location was also cleared prior to drilling work.

SIRATI also arranged for public locates to be conducted through Ontario One Call.

5.2 Drilling and Excavating

Drilling work was conducted by a licensed well contractor, Elements Geo, under the supervision of SIRATI staff.

The field investigations for the Phase Two ESA were conducted between June 19 and 21, 2024. These investigations involved drilling four boreholes (BH/MW-101, BH/MW-102, BH/MW-103, and BH/MW-104) to a maximum depth of 8.1 meters below ground surface (mbgs). Additionally, six (6) samples were taken using a hand auger to a maximum depth of 1 meter below ground surface (mbgs).

Four (4) monitoring wells (BH/MW-101, BH/MW-102, BH/MW-103, and BH/MW-104) were installed on the Site for groundwater observation, sampling, and testing. Soil and groundwater samples were collected from boreholes/monitoring wells and analyzed for one or more of the following parameters: PHCs, BTEX, PCBs, PAHs, VOCs, metals, As, Sb, Se, Na, B-HWS, Cl-, CN-, Cr(VI) and Hg.

No petroleum-based greases or solvents were used during drilling activities. Environmental sampling protocol were followed during sampling and preventive measures were carried out to minimize cross-contamination between samples and borehole locations. Details are discussed in the SAP in Appendix B.

The details of soil stratigraphy are outlined in borehole logs included in Appendix C.

SIRATI monitored the drilling and excavation activities, collected soil samples as discrete intervals, and recorded the physical characteristics of the soil, depth of soil samples and total depth of boreholes. Representative soil samples were recovered at regular intervals by taking split spoon samples during drilling activities and grab samples for the shallow boreholes and screened in the field for selection of soil samples for laboratory analysis.

5.3 Soil Sampling

The soil sampling for geological characterization and chemical analysis during this Phase Two ESA investigation was undertaken in accordance with the SAP in Appendix B.

Decontamination and other protocols were followed during sample collection and handling to minimize the potential for sample cross-contamination. New, dedicated disposable nitrile gloves were used for the handling and sampling of each retrieved soil core. The soil core samplers were decontaminated between sampling intervals 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 collected in sealed, labeled containers. Drill cuttings were placed in sealed drums upon completion of sampling activities.

Upon retrieval of the soil samples from the sampler, a portion of the soil sample was immediately transferred to the laboratory supplied containers, another portion was transferred to a Ziploc bag for the measurement of vapour concentrations, and the remaining sample was used for lithological observations and visual examination in the field. Measures for quality control 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 analysis of BTEX, PHC F1, and/or VOCs were collected using a laboratory-supplied soil core sampler, placed into vials containing methanol for preservation purposes and sealed using Teflon lined septa lids. Soil samples were placed in clean coolers containing ice prior to and during transportation to AGAT laboratories of Mississauga. The samples were transported and submitted to AGAT Laboratories following Chain of Custody protocols for chemical analysis.

A total of eleven (11) soil samples, including one (1) duplicate sample, were submitted to AGAT Laboratories for the analysis of one or more of the following parameters: petroleum hydrocarbons Fractions 1 to 4 (PHCs) including benzene, toluene, ethylbenzene and Xylenes (BTEX), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), Polychlorinated biphenyl (PCBs), and metals and inorganic (M&I) parameters [(As, Sb, Se, Na, B-HWS, Cl-, CN-, Cr-VI, Hg, low or high pH, electrical conductivity (EC) and sodium adsorption ratio (SAR)]. The rationale for the selection of the soil samples for analysis was based on the location, depth, texture, classifications, and soil vapor concentrations of the samples, as summarized in Table 5 below:

Table 5: Soil Samples and Chemical Analysis Performed

Borehole / Monitoring Well ID	Sample ID	Date	Sample Depth (mbgs)	Soil Vapour Reading (ppm)	Chemical Analysis Performed
BH/MW-101	BH/MW-101 SS3	19-June-24	1.5 – 2.0	0	M&I, PAH, PHCs, BTEX, VOCs, PCBs
BH/MW-102	BH/MW-102 SS5	19-June-24	3.0 - 3.5	0	M&I, PAH, PHCs, BTEX, VOCs, PCBs
BH/MW-103	BH/MW-103 SS4	20-June-24	2.3 – 2.7	0	M&I, PAH, PHCs, BTEX, VOCs, PCBs
BH/MW-104	BH/MW-104 SS4	20-June-24	2.3 – 2.7	0	M&I, PAH, PHCs, BTEX, VOCs, PCBs
BH-105	BH-105 SS1	21-June-24	0.0 – 0.5	1	M&I, PAH, PHCs, BTEX, VOCs, PCBs
BH-106	BH-106 SS2	21-June-24	0.5 – 1.0	0	M&I, PAH, PHCs, BTEX, VOCs, PCBs
BH-107	BH-107 SS1	21-June-24	0.0 – 0.5	0	M&I, PAH, PHCs, BTEX, VOCs, PCBs
BH-108	BH-108 SS2	21-June-24	0.5 – 1.0	0	M&I, PAH, PHCs, BTEX, VOCs, PCBs
BH-109	BH-109 SS1	21-June-24	0.0 – 0.5	0	M&I, PAH, PHCs, BTEX, VOCs, PCBs
BH-110	BH-110 SS2	21-June-24	0.5 – 1.0	0	M&I, PAH, PHCs, BTEX, VOCs, PCBs
BH-108	Dup-1	21-June-24	0.5 – 1.0	0	M&I, PAH, PHCs, BTEX, VOCs, PCBs

5.4 Field Screening Measurements

A portion of each soil core was placed in a sealed Ziploc plastic bag and allowed to reach ambient temperature prior to field screening, using an RKI Instruments, Eagle Potable Multi-gas detector (with Methane Elimination Switch), S/N E2F426, operated in the methane elimination mode. The instrument measures combustible gases in the atmosphere. The monitor has a range of 0 ppm to 50,000 ppm and an accuracy of ± 5 %. The monitor was calibrated with hexane prior to field screening as per the calibration procedure outlined by RKI Instruments in "Instruction Manual Eagle Series Portable Multi-Gas Detector 71-0154RK" released on March 11, 2016. The instrument was calibrated to hexane standards for both ppm and LEL prior to each use in accordance with the calibration procedures outlined in the instruction manual for the instrument. Our technician was trained by the supplier for the proper calibration procedure. The instrument is calibrated or tuned up by the supplier (Spectra Scientific Inc.) seasonally. The measurements were made by inserting the instrument's probe into the plastic bag while manipulating the sample to ensure the volatilization of the soil gases. These readings provide a real-time indication of the relative concentration of combustible vapors encountered in the subsurface during drilling and are used to aid in the assessment of the vertical and horizontal extent of contamination and the selection of soil samples for laboratory analysis.

The field screening measurements, in parts per million (ppm), are presented in Table 5 of this report.

5.5 Groundwater Monitoring Well Installation

Four (4) monitoring wells (BH/MW-101, BH/MW-102, BH/MW-103, and BH/MW-104) were installed on the Site. 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 licensed well contractors, Elements Geo.

The monitoring wells consisted of a 3.0 m length of 50 mm diameter PVC screen and an appropriate length of PVC riser pipe. All pipe connections were factory-machined threaded flush couplings. The annular space around the wells was backfilled with sand to an average height of 0.3 m to 0.6 m above the top of the screen. A bentonite seal was added from the top of the sand pack to approximately 0.3 mbgs. The monitoring wells were completed with aboveground flush-mount well protective casings at ground surface with cement grout in the surrounding annular space to complete the seal.

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.

5.6 Field Measurement of Groundwater Quality Parameters

The installed monitoring wells were developed to remove fine sediment particles potentially lodged in the sand pack and well screen to enhance hydraulic response with the surrounding formation water. Dedicated Waterra inertial lift pumps, low density polyethylene tubing were used for well development and groundwater sampling.

Well development continued until all standing water or a minimum of three (3) well volumes of groundwater had been removed. Well-development details were documented on a well-development log sheet.

5.7 Groundwater Sampling

Groundwater monitoring activities at the Site consisted of measuring the depth to groundwater level in each monitoring well so that groundwater flow direction below the Site could be assessed. Water levels were measured with respect to the top of the casing by means of an electronic water level meter equipped with an interface probe. The water level measurements were recorded in a bound field notebook. The interface probe was decontaminated between monitoring well locations.

In addition, a total of three (3) groundwater samples were submitted to the AGAT laboratory for the analysis of one or more of the following compounds: PHCs, BTEX, PCBs, PAHs, VOCs, metals, As, Sb, Se, Na, B-HWS, Cl-, CN-, Cr (VI) and Hg. Additionally, one (1) trip blank sample was for analyzing VOCs along with the groundwater samples for QA/QC purposes.

BH/MW-04 was previously drilled Monitoring well by SIRATI.

During the groundwater sampling, groundwater samples proposed for analysis of dissolved metals were field filtered using dedicated 0.45-micron Waterra filters to remove any sediment in the groundwater samples as required by the Analytical Protocol.

The details of groundwater samples are presented in Table 6.

Table 6: Groundwater Samples and Chemical Analysis Performed

Monitoring Well ID	Sample ID	Date	Chemical Analysis Performed
BH/MW-04	BH/MW-04	July 04, 2024	M&I, PHCs(F1-F4), BTEX, VOCs, PAH, and PCBs
BH/MW-102	BH/MW-102	July 04, 2024	M&I, PHCs(F1-F4), BTEX, VOCs, PAH, and PCBs
BH/MW-103	BH/MW-103	July 04, 2024	M&I, PHCs(F1-F4), BTEX, VOCs, PAH, and PCBs
Trip Blank	- - - -	- - - -	VOCs

5.8 Sediment Sampling

As no water body was present at the Site, sediment sampling was not within the scope of this Phase Two ESA.

5.9 Analytical Testing

AGAT Laboratories performed chemical analysis on soil and groundwater samples collected from boreholes/monitoring wells at the Site. AGAT Laboratories is an accredited laboratory under the Standards Council of Canada (SCC) and the Canadian Association for Laboratory Accreditation (CALA), in accordance with the international standard ISO/IEC 17025:2005 – General Requirements for the Competence of Testing and Calibration Laboratories. AGAT Laboratories is accredited for all parameters required under Ontario Regulation 153/04 – Record of Site Condition, as outlined in the MECP Technical Update entitled "Laboratory Accreditation Requirements under the New Record of Site Condition Regulation (O. Reg. 153/04)."

5.10 Residue Management Procedures

The residue materials produced during the soil and groundwater sampling programs consisted of soil cuttings from drilling activities, decontamination fluids from equipment cleaning, and water from well development and purging. The soil cuttings generated from the drilling program were placed in labeled, sealed drums. All residue

fluids (i.e., wash water and purged groundwater) generated during the sampling programs were also collected and left on-site in these sealed drums.

The drums of soil cuttings and excess purged water will be hauled off-site by a licensed waste disposal contractor.

5.11 Elevation Surveying

The elevations of boreholes and monitoring wells (ground surface and top of casing) were surveyed by SIRATI personnel, using a handheld device, high precision and accurate global navigation satellite system (GNSS) handheld device (Sokkia SHC500) which transmits signals from a constellation of satellites to determine the position and elevation of the boreholes/monitoring wells. The elevations at the borehole and monitoring well locations are presented in the borehole log (Appendix C).

5.12 Quality Assurance and Quality Control Measures

A Quality Assurance and Quality Control (QA/QC) program, developed as part of the SAP (see Appendix B), was followed by SIRATI to ensure that the integrity of the soil and groundwater samples was maintained and that they were representative of the site conditions. The QA/QC program was developed in accordance with the Analytical Protocol.

The jars and preservatives (where applicable) used in the collection of soil and groundwater samples were supplied by AGAT Laboratories. The soil samples intended to be submitted for analysis of VOCs and PHC F1 were immediately preserved in laboratory-provided methanol vials to sequester the volatile compounds.

The soil samples from the boreholes which were advanced using augers were collected with split spoon samplers, which were decontaminated after the extraction of each sample.

The soil and groundwater samples were labeled as they were collected. Samples were stored in ice-packed coolers until the samples were transported to the laboratory for chemical analysis.

The soil and groundwater samples were handed over to the laboratory by SIRATI personnel. Chains of Custody of the samples were logged with Chain of Custody forms. Copies of the forms are included in Appendices D and E.

As discussed in Section 5.5 above, the monitoring wells were installed by a licensed driller, Elements Geo. The augers and sampling equipment arrived at the Site in a pre-cleaned condition. The augers were cleaned with a brush and cleaned between monitoring well locations.

The stainless-steel sampling tools were decontaminated between sampling locations in the following sequence: cleaned with a brush to remove adhered soil and/or debris, washed with a dilute solution of Alconox, rinsed with potable water and distilled water, rinsed with methanol and allowed to air dry.

Total organic vapor (TOV) concentrations were measured in the headspaces of the Ziploc bags containing soil samples to facilitate the selection of soil samples for analysis of VOCs and PHCs. The TOV measurements were performed using a RKI Instruments, Eagle Potable Multi-gas detector (with Methane Elimination Switch), S/N E2F426.

Field duplicate samples for soil were submitted to AGAT Laboratories for chemical analysis.

For soil samples, one (1) duplicate sample (Dup-1, a duplicate of BH-108 SS2) was submitted to AGAT

Laboratories for analysis of M&I, PAH, PHCs, BTEX, VOCs, and PCBs. In addition, one (1) trip blank sample was submitted with the batch of groundwater samples for analysis of VOCs.

The laboratory quality assurance program included the analysis of laboratory duplicate samples, method blanks, matrix spikes and samples of reference materials, in accordance with the Analytical Protocol. These analytical results comprise portions of the Certificates of Analysis in Appendices D and E.

6.0 REVIEW AND EVALUATION

6.1 Geology

The detailed soil stratigraphy encountered in each borehole is provided on the borehole logs in Appendix C. 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.

Fill material and topsoil were encountered at the ground surface at the borehole locations. The general stratigraphy at the Phase Two Property, as observed in the boreholes, generally consisted of silty sand to silty sand till below the fill and topsoil material. The final depth of the native till deposit was not determined as the boreholes were terminated within this layer at a maximum depth of 9.3 mbgs. A brief description of the soil stratigraphy at the Site, in order of depth, is summarized as follows.

BH/MW-101:

- Starting from the surface, the borehole begins with fill material, transitioning through gravelly sand, sand and gravel layers, followed by silty sand till, silt till, and finally clayey silt till.
- The borehole was terminated at a depth of 9.3 meters below the ground surface (mbgs).

BH/MW-102:

- Starting from the surface, the borehole begins with topsoil, progressing downwards through layers of silty sand, sandy silt, silty sand till, and silt, with another layer of silty sand till at depth.
- The borehole was terminated at 7.2 meters below the ground surface (mbgs).

BH/MW-103:

- Starting with topsoil, followed by layers of silty sand, silt till, and additional silty sand till layers, the borehole ends with a final layer of silty sand.
- The borehole was terminated at 8.2 meters below ground surface (mbgs).

BH/MW-104:

- Beginning with topsoil and fill material, the borehole then progresses through layers of silty sand, silt till, clayey silt, and silty sand till, ending with a final layer of silty sand.
- The borehole was terminated at a depth of 7.5 meters below ground surface.

Bedrock was not encountered to a maximum drilling depth of approximately 9.33 mbgs during the Phase Two ESA investigations completed at the Site.

6.2 Groundwater Elevations and Flow Direction

On July 04, 2024, groundwater levels were measured in the monitoring wells using an electronic oil/water interface probe. The groundwater levels of the monitoring wells were measured and documented in Table 7, and are presented in the borehole logs in Appendix C.

Table 7: Summary of Final Groundwater Conditions

Monitoring Well ID	Ground Elevation (mAMSL)	Well Depth (mbgs)	July 04, 2024	
			Depth to GW (mbgs)	GW Elev. (mAMSL)
BH/MW-01	254.2	6.2	5.6	248.56
BH/MW-02	257	9.4	4.1	252.94
BH/MW-03	253.3	6.1	1.8	251.54
BH/MW-04	249.1	10.7	7.7	241.39
BH/MW-101	255.66	7.81	3.8	251.90
BH/MW-102	254.68	4.72	2.5	252.20
BH/MW-103	252.01	6.95	4.5	247.53
BH/MW-104	252.82	6.09	3.1	249.68

The interface probe did not detect any free-flowing product within the monitoring wells. No visual evidence was observed that suggested the existence of free-flowing products within the groundwater.

6.3 Groundwater Hydraulic Gradient

The horizontal hydraulic gradient was estimated for the water table of the aquifer based on the July 04, 2024 groundwater elevations.

The horizontal hydraulic gradient 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 horizontal hydraulic gradient was calculated based on three (3) sets of monitoring wells, summarized below:

- 0.0015 m/m BH/MW-101 to BH/MW-102 (East)
- 0.02597 m/m BH/MW-103 to BH/MW-104 (South)
- 0.0174 m/m BH/MW-04 to BH/MW-103 (North)

The average horizontal hydraulic gradient is approximately 0.0150 m/m. These hydraulic gradient values indicate that the groundwater generally flows in a south-west direction.

It should be noted that vertical hydraulic gradients were not evaluated for the Site as a second water-bearing unit was not encountered at the depths investigated at the Site.

6.4 Soil Texture

Based on the observed heterogeneity of the subsurface strata at the Site, the QP is of the opinion that for assessment purposes in this report, coarse-textured soil standards are the appropriate standards for this investigation.

6.5 Soil Field Screening

The TOV concentrations measured in the headspaces of Ziploc sample bags returned readings ranging from 0.0 ppm to a maximum of 1 ppm, which are considered to be similar to the background to moderate conditions.

6.6 Soil Quality

In accordance with the scope of work, chemical analysis was performed on selected soil samples recovered from the boreholes. The selection of representative "worst case" soil samples was based on field screening and 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 D.

A total of eleven (11) soil samples, including one (1) duplicate sample, were submitted to AGAT Laboratories for the analysis of one or more of the following parameters: PHCs, VOCs, PCBs, PAHs, BTEX, and M&I.

The pH values of soil samples collected from surface soil for depths less than 1.5 mbgs ranged from 6.13 to 6.67 and for subsurface soil for depths greater than 1.5 mbgs ranged from 6.5. to 6.7. These values were within the acceptable ranges of 5 to 9 for surface soil and 5 to 11 for subsurface soil. Therefore, the Phase Two Property was not considered to be environmentally sensitive, as per criteria in Section 41 of O. Reg. 153/04, and the MECP Table 9 Standards were applicable for assessing the soil and groundwater quality at the Phase Two Property.

Based on the review of Certificates of Analysis, the analytical results of the tested soil samples during the Phase Two ESA investigations met their respective MECP Table 9 Standards.

Figure 7 shows the soil sampling location and parameters tested at each borehole location. As no exceedances were found in the soil, a summary table showing analytical results are not presented with this report.

6.7 Groundwater Quality

Copies of the laboratory Certificates of Analysis for the analyzed groundwater samples, together with the applicable MECP Table 8 and 9 Standards, are provided in Appendix E.

No evidence of free product (i.e., visible film or sheen) or odour was observed during monitoring, well purging and groundwater sampling from the sampled wells. Additionally, no indications of non-aqueous phase liquids were identified by the water level meter, equipped with an interface probe, during groundwater level measurements. Groundwater samples to be analyzed for metal parameters were field-filtered at the time of collection.

A total of three (3) groundwater samples were submitted to the accredited laboratories, AGAT Laboratories for analysis of one or more of PHCs, VOCs, PAHs, BTEX, PCBs, metals, As, Sb, Se, Na, B-HWS, Cl-, CN-, Cr(VI) and Hg. In addition, one (1) trip blank sample was submitted with the groundwater samples for analysis of VOCs for QA/QC purposes.

A review of the analytical results indicated that the concentrations of the tested parameters for the analyzed groundwater samples were below the MECP Table 9 Standards. However, the Trichloroethylene (TCE) exceeded the BH/MW-04 and Dissolved Cobalt found exceeded in BH/MW 102 for Table 9 RPIICC.

Table 8: Summary of Exceedances in Groundwater Sample:

Sample ID	Parameters	Unit	Detected Concentration	MECP Table 3 RPI Standards
BH/MW-102	Dissolve Cobalt	µg/g	5.35	3.8
BH/MW-04	Trichloroethylene	µg/g	4.84	1.6

A summary of the analytical results and maximum concentrations for each contaminant of concern in groundwater samples is included in Appendix F.

6.8 Sediment Quality

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

6.9 Quality Assurance and Quality Control Results

The QA/QC samples for this Phase Two ESA investigation included field duplicates for soil, and a trip blank sample for groundwater. The trip blank samples were submitted with the batch of groundwater samples for analysis of VOCs parameters.

Field Duplicates:

One (1) field duplicate soil sample were collected and submitted for chemical analysis. Details of duplicate samples and analysis are presented in the table below.

Media	Duplicate Sample ID	Original Sample ID	Test Conducted
Soil	Dup 1	BH-108 SS2	Metals and Inorganics, BTEX, PAH, PHC, VOC and PCB

The purpose of the duplicate samples is to measure the precision or reproducibility of the field and laboratory methodology used in the collection and analysis of the samples. The precision is evaluated in terms of the relative percent difference (RPD).

Trip Blank:

One (1) trip blank sample was submitted to the laboratory for analysis of VOC parameters. The trip blank sample was created at the laboratory by completely filling the volatile vial container with lab grade deionized water and sealing the container. The trip-blank vials were never opened until they were returned to the laboratory. The purpose of the trip blank was to detect and identify any VOC parameters contaminant of the samples due to traveling to and from the laboratory.

6.9.1 Data Validation

A data review process, often referred to as “data validation”, is conducted to assess whether the data quality objectives (DQOs) were satisfied. SIRATI establishes data validation criteria that require the analytical data to have an acceptable level of precision, accuracy, representativeness, completeness and comparability. The analytical results of the investigation are used when assessing the reliability of data reported by analytical laboratories including maximum holding times for the storage of samples/sample extracts between collection and analysis, analytical methods, field and/or laboratory quality assistance samples, recovery ranges for spiked samples and surrogates, Reporting Detection Limits (RDLs) and precision required when analyzing laboratory

replicate and spiked samples. The review of the data in the Certificate of Analysis indicates:

The Relative Percent Difference (RPD) between the involved samples is calculated using the following formula:

$$RPD = \{(A–B) \div [(A+B)/2]\} \times 100$$

Where:

A = concentration of compound in the primary sample
B = concentration of compound in the duplicate sample

However, the RPD is significant only for result pairs with concentrations greater than 5 time the analytical method detection limit in both samples and are not calculated when concentration are below minimum detection limits. The calculated RPD and the acceptable RPD limits for analyzed parameters in the duplicate soil and groundwater samples.

A review of the calculated RPD indicated that the RPD for the primary sample and their respective duplicate samples were within the acceptable range for the soil and groundwater tested parameters.

One (1) trip blank sample was submitted for chemical analysis of VOC parameter. The concentration of VOC parameters was below the minimum laboratory detection limits (RDLs) in the trip-blank samples. Therefore, there was no interference with the groundwater samples during transportation to and from the analytical laboratory. The results of the Trip Blank sample is included in Appendix E.

The sampling and testing program was carried out in accordance with the SAP.

Laboratory quality control limits for duplicate, method blank, method blank spike, matrix spike and surrogate recoveries were within the acceptable limits.

All of the samples were handled in accordance with the Analytical Protocol, with respect to preservation methods, storage requirements or container type without any exception. Holding times were met for all samples. Laboratory quality control limits for duplicate, method blank, method blank spike, matrix spike and surrogate recoveries were within the acceptable limits.

In summary, the decision making was not affected by the quality of the data obtained and the overall objectives of the assessment were met.

6.10 Phase Two Conceptual Site Model

This Phase Two Conceptual Site Model (Phase Two CSM) is prepared as a part of the Phase Two Environmental Site Assessment (Phase Two ESA) by Sirati and Partners Consultants Ltd. (SIRATI) in support of filing a Record of Site Condition (RSC) for a portion of a property located at 159 Confederation Street, Halton Hills, Ontario (hereinafter referred to as the “Phase Two Property” or the “Site”).

This Phase Two CSM is based on the findings of the SIRATI 2024 Phase One Environmental Site Assessment (Phase One ESA, Project No. SP23-1265-00) and the Phase Two ESA completed for the Phase Two Property.

6.10.1 Description and Assessment

The Phase Two Property is located on the east side of Confederation Street, approximately 300 meters northwest of Mountain Street, in Halton Hills, Ontario. The total area of the Phase Two Property is approximately 122,647

m² (12.647 hectares), according to the survey prepared by J.D. Barnes Limited. The Phase Two Property is bounded by a residential area and Confederation Street to the south and west, and by the Credit River followed by a residential area to the east and north.

The Phase One Study Area consists of farmland and residential buildings within a radius of 250 meters from the Phase One Property boundaries. This 250-meter radius extends roughly to farmland to the west. A Site Plan is presented in Figure 1.

The information for the Phase Two Property including the legal description, Property identification number (PIN), zoning, and Universal Transverse Mercator zone 17 (UTM) coordinates are presented in the Table below:

Municipal Address	**Legal Description**	**PIN**	**Zoning**	UTM Coordinates - Centre Point of the Site
159 Confederation Street, Halton Hills, Ontario	LT 26, RCP 1555 , EXCEPT PT 2 & 3, 20R8779 ; S/T 242783, 701169 ; HALTON HILLS	25011-0064 (LT)	Easting: 586026.09 m E	159 Confederation Street, Halton Hills, Ontario

The Phase Two Property is surrounded by the following properties:

North: Residential buildings and Wooded area
East: Residential buildings and credit river
South: Residential buildings
West: Confederation Street followed by Farmland and residential properties.

6.10.1.1 Areas Where Potentially Contaminating Activity Has Occurred

Potentially Contaminating Activities (PCAs) were identified at the Phase Two Property and neighboring properties within the Phase One Study Area based on records review, interviews and site reconnaissance, as part of the SIRATI 2024 Phase One ESA. The PCAs identified are listed in table below and are shown on Figure 2.

Potentially Contaminating Activity	**Location of PCA**			**Source of Information**	**Considered an APEC**	**Potentially Impacted Media (Ground Water, Soil and/or Sediment)**
	On-site or off-site	**Up-gradient (Y/N)**	**Proximity to Site**			
PCA-1 #30 – Importation of Fill Material of Unknown Quality. Fill material was brought to the site to backfill a pit after excavation for aggregate resources.	On-Site	N/A	N/A	Fill or Debris from site visit (4.3.3) Phase One ESA Report	Yes	Soil and Groundwater

Potentially Contaminating Activity	Location of PCA			Source of Information	Considered an APEC	Potentially Impacted Media (Ground Water, Soil and/or Sediment)
	On-site or off-site	Up-gradient (Y/N)	Proximity to Site			
PCA-2 #Other – Historical Industrial Use (Sand and Gravel Pit, Concrete block plant) The Site is being used for the excavation of aggregate resources.	On-Site	N/A	N/A	Aerial Photographs (4.3.1) Phase One ESA Report	Yes.	Soil and Groundwater
PCA-3 #Other – Spill Pipe/Hsoe leak incident reported.	Off-Site	No	117 m Northwest Portion of the Phase One Property	ERIS report (4.2) Phase One ESA Report	No	N/A
PCA-4 #40 – Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications. The pesticide operator is registered.	Off-Site	No	115 m Northeast portion of the Phase One property	ERIS report (4.2) Phase One ESA Report	No	N/A

6.10.1.2 Areas of Potential Environmental Concern

Areas of Potential Environmental Concern (APECs) identified at the Phase Two Property that may have resulted from the PCAs identified within the Phase One Study Area are listed in table below and are shown on Figure 3.

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on the Phase One Property	Potentially Contaminating Activity	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC-1 Imported fill material of unknown quality to back fill pit after excavation at the Site.	Entire Site	#30 – Importation of Fill Material of Unknown Quality	On-Site	M&I, PHCs, VOCs, PAHs, and PCBs	Soil and Groundwater
APEC-2 Historical use for the extraction of aggregate resources	Northwest and south portion	#Other – Historical Industrial Use (Sand and Gravel Pit, Concrete block plant)	On-Site	M&I, PHCs, BTEX.	Soil and Groundwater

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on the Phase One Property	Potentially Contaminating Activity	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
Notes: PHCs – Petroleum Hydrocarbons Fractions 1 to 4 (F1-F4) PAHs – Polycyclic Aromatic Hydrocarbons VOCs – Volatile Organic Compounds PCBs – Polychlorinated Biphenyls BTEX – Benzene, Toluene, Ethylbenzene, and Xylenes M&I - Metals (Ba, Be, B, Cd, Cr, Co, Cu, Pb, Mo, Ni, Ag, Tl, U, V and Zn), Hydride forming metals (Sb, As, Se), as well as Na and Other Regulated Parameters (B-HWS, Cl-, CN-, Electric Conductivity, Cr-VI, Hg, Low or high pH, SAR) as per O. Reg 153/04 Analytical Method, amended July 1, 2011.					

6.10.1.3 Any Subsurface Structures and Utilities on, in or under the Phase Two Property that May Affect Contaminant Distribution and Transport

At the time of the assessment, the Phase Two Property was undeveloped and covered with wooded areas. No subsurface structures or underground utilities were observed or expected at the Phase Two Property.

6.10.2 Description of and, as Appropriate, Figures illustrating, Physical Setting of the Phase Two Property

6.10.2.1 Stratigraphy from Ground Surface to the Deepest Aquifer or Aquitard Investigated

The Phase One Property is located in an area with physiography of spillways with a surficial geology of Glaciofluvial deposits which is river deposits and delta topset facies with Gravelly deposits, Modern alluvial deposits which are clay, silt, sand, gravel, may contain organic remains, and Till which is Clay to silt-textured till (derived from glaciolacustrine deposits or shale), over bedrock of shale, limestone, dolostone and siltstone, Queenston formation. Bedrock in the area is anticipated to be covered with 7 m to 24 m of drift.

The detailed soil stratigraphy encountered in each borehole is provided on the borehole logs in Appendix C. 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.

Fill material and topsoil were encountered at the ground surface at the borehole locations. The general stratigraphy at the Phase Two Property, as observed in the boreholes, generally consisted of silty sand to silty sand till below the fill and topsoil material. The final depth of the native till deposit was not determined as the boreholes were terminated within this layer at a maximum depth of 9.3 mbgs. A brief description of the soil stratigraphy at the Site, in order of depth, is summarized as follows.

BH/MW-101:

- Starting from the surface, the borehole begins with fill material, transitioning through gravelly sand, sand and gravel layers, followed by silty sand till, silt till, and finally clayey silt till.
- The borehole was terminated at a depth of 9.3 meters below the ground surface (mbgs).

BH/MW-102:

- Starting from the surface, the borehole begins with topsoil, progressing downwards through layers of

silty sand, sandy silt, silty sand till, and silt, with another layer of silty sand till at depth.

- The borehole was terminated at 7.2 meters below the ground surface (mbgs).

BH/MW-103:

- Starting with topsoil, followed by layers of silty sand, silt till, and additional silty sand till layers, the borehole ends with a final layer of silty sand.
- The borehole was terminated at 8.2 meters below ground surface (mbgs).

BH/MW-104:

- Beginning with topsoil and fill material, the borehole then progresses through layers of silty sand, silt till, clayey silt, and silty sand till, ending with a final layer of silty sand.
- The borehole was terminated at a depth of 7.5 meters below ground surface.

6.10.2.2 Hydrogeological Characteristics, including aquifers, aquitards and, in Each Hydro stratigraphic Unit, Where Contaminants Are Present, Lateral and Vertical Hydraulic Gradients

The Phase One Property is located within the larger hydrogeological region known as the Southern Ontario Lowlands. A watershed map provided by Credit Valley Conservation (CVC) shows that the Phase One Property is situated within the Credit Valley River watershed. According to the topographic maps, the inferred groundwater flow direction in the area is likely to the east-northeast in a similar manner as the topography of the area. Groundwater flow is expected to flow towards the east-northeast direction.

Four (4) monitoring wells (BH/MW-101, BH/MW-102, BH/MW-103, and BH/MW-104), were installed at the Phase Two Property during the investigations for the Phase Two ESA. Based on the groundwater measurements on July 04, 2024, the groundwater flow direction at the Site appears to be towards the east-northeast. The groundwater contours and interpreted groundwater flow direction are shown on Figure 6.

Based on groundwater elevations measured on July 04, 2024, the estimated horizontal gradient for the investigated aquifer was 0.0015 m/m, 0.02597 m/m, and 0.0174 m/m (average 0.015 m/m). Vertical hydraulic gradients were not evaluated for the Site as a second aquifer was not encountered at the depths investigated during this Phase Two ESA.

6.10.2.3 Approximate Depth to Bedrock

Bedrock was not encountered at a maximum drilling depth of approximately 9.3 mbgs at the Phase Two Property.

6.10.2.4 Approximate Depth to Water Table

Based on groundwater levels measured on July 04, 2024, depth to the water table at the Phase Two Property ranges from 2.78 to 8.71 mbgs.

6.10.2.5 Any Respect in Which Section 35, 41 or 43.1 of the Regulation Applies to the Phase Two Property

We used the MECP Table 8 and 9 Standards, with coarse-textured soils, for Residential/Parkland/Institutional /Industrial/Commercial/Community Property use within 30 m of a Water Body in a Potable and Non-Portable

Ground Water Condition to evaluate the environmental condition at the Phase Two Property. Therefore, Section 41 Applies to the Phase Two Property.

Section 41 of the O.Reg. 153/04 does apply due to the following:

- The Phase Two Property is within an area of natural significance,
- The Phase Two Property does include and is adjacent to an area of natural significance or part of such an area.
- The Phase Two Property does not include land that is within 30 m of an area of natural significance or part of such an area.
- The pH values of soil samples collected from surface soil for depths less than 1.5 mbgs ranged from 6.13 to 6.67 and for subsurface soil for depths greater than 1.5 mbgs ranged from 6.50 to 6.73. These values were within the acceptable ranges of 5 to 9 for surface soil, and 5 to 11 for subsurface soil. Therefore, the Phase Two Property is not considered to be environmentally sensitive, as per criteria in Section 41 of O. Reg. 153/04.
- The Phase Two Property is not a shallow soil property, as the bedrock was not encountered within 2 mbgs during the investigation.
- There is no water body at the Site or within 30 m from the Site boundaries. Therefore, Section 43.1 of O. Reg. 153/04 (Site Condition Standards, Shallow Soil Property or Water Body) does not apply to the Phase Two Property.

6.10.2.6 Areas on, in or under the Phase Two Property Where Excess Soil is Finally Placed

Fill material was encountered within the boreholes. Chemical analysis conducted on the fill material did not identify any parameter with concentrations higher than the Table 8 and 9 Standards.

6.10.2.7 Approximate Locations of Any Proposed Buildings and Other Structures

Based on Site reconnaissance during Phase One ESA, SIRATI didn't observe any structure on the site except one shed located at the northeast portion of the property. It is our understanding that there is a proposal to develop a 2-storied multiple residential units with a single level basement in east and northeast portion of the Phase Two Property.

6.10.3 Contaminants Greater Than the Applicable Standards

Trichloroethylene (TCE) exceeded the applicable MECP Table 9 Standards at the Phase Two Property in BH/MW-04.

6.10.3.1 Each Area Where A Contaminant Is Present on, in or under the Phase Two Property

Trichloroethylene (TCE) exceeded acceptable levels in BH/MW-04, located in the northeast portion of the property as per Table 9 RPIICC.

6.10.3.2 The Contaminants Associated with Each Contaminated Area

Trichloroethylene exceeded the acceptable levels specified in Table 9 RPIICC at the Phase Two Property.

6.10.3.3 Each Medium in Which a Contaminant is Present

BH/MW-04 (Northeast portion of the property):

- Trichloroethylene (TCE): Present in groundwater.

6.10.3.4 A Description and Assessment of What is Known About Each of the Contaminated Areas

BH/MW-04 is located in the northeast portion of the property, where Trichloroethylene (TCE) has been detected at concentrations above the regulatory limits specified in Table Table 9 RPIICC. This indicates a potential source of contamination impacting groundwater in this area.

BH/MW-102 is situated in the northwest portion of the property. Both TCE and dissolved cobalt have been detected at concentrations exceeding the regulatory limits specified in Table 9 RPIICC in groundwater. This suggests localized contamination that may be related to historical activities in the area.

6.10.3.5 Distribution of Each Parameter Group, in Each Contaminated Area, for each Medium in Which the Contaminant is Present, Together with Figures Showing the Distribution

BH/MW-04 is located in the northeast portion of the property, where Trichloroethylene (TCE) has been detected at concentrations above the regulatory limits specified in Table 9 RPIICC.

6.10.3.6 The Reason for Discharge of Contaminants Present at the Phase Two Property

The discharge of contaminants at the Phase Two Property is likely due to the following reasons:

1. **Historical Industrial Activities:** Past industrial processes or waste disposal practices may have introduced contaminants such as Trichloroethylene (TCE) and dissolved cobalt into the soil and groundwater. These activities could include improper handling, storage, or disposal of chemicals and hazardous materials.
2. **Groundwater Migration:** Contaminants initially released to the soil or surface water may have migrated through the soil and into the groundwater due to natural processes, such as leaching or infiltration. This migration can spread contaminants from their original source.

6.10.3.7 Migration of Contaminants Present at the Phase Two Property, including any Preferential Pathways

Trichloroethylene (TCE) exceedances in water has been identified in the BH/MW-04, which is greater than the applicable MECP Table 9 Standards, at the Phase Two Property. Figure Number 6 is identifying groundwater flow direction towards east and hence, there is potential for contaminant migration in the close vicinity of the property from BH/MW-04.

6.10.3.8 Climatic or Meteorological Conditions That May Have Influenced Distribution and Migration of the Contaminants

Precipitation: Heavy rainfall and storm events can increase surface runoff and leaching, spreading contaminants into groundwater and surface water.

Temperature: High temperatures can enhance the evaporation of volatile contaminants like Trichloroethylene (TCE), affecting air quality and potential vapor intrusion.

6.10.3.9 Information Concerning Soil Vapour Intrusion of Contaminants into Buildings

Elevated VOCs in indoor air can pose health risks, including respiratory issues. Cobalt typically affects health through ingestion or direct contact rather than vapor.

6.10.4 Cross-sections Showing Contaminants Greater than Standards, by Parameter Group

6.10.4.1 The Lateral and Vertical Distribution of Contaminants in Each Area and for Each Medium

There is no contaminants in soil is identified at the Phase Two Property. Hence the lateral and vertical distributions of contaminants in soil is not presented in any figure. However, a cross section of the soil profile at the Phase Two Property is presented in Figure 5.

6.10.4.2 Approximate Depth to Water Table in Each Contaminated Area

Trichloroethelene exceedances were found in BH/MW-04. Based on groundwater levels measured on July 21, August 13 and 18, 2021, depth to the water table at the Phase Two Property ranges from 6.7 to 7.9 mbgs. Morespecific groundwater level for BH/MW-04 if found at 7.7 mbgl with 241.39m elevation.

6.10.4.3 Stratigraphy from Ground Surface to the Deepest Aquifer or Aquitard Investigated

Fill material is encountered at the ground surface in all boreholes. The general stratigraphy at the Phase Two Property, as observed in the boreholes, generally consisted of silty clay to clayey silt below the fill material. Sandy silt was observed below the silty clay or clayey silt layer. The final depth of the native till deposit was not determined as the boreholes were terminated within this layer at a maximum depth of 8.1 mbgs. Geological Cross Sections, illustrating the soil profile, monitoring well constructions and groundwater elevations, are shown on Figure 5.

6.10.4.4 Any Subsurface Structures and Utilities That May Affect Contaminant Distribution and Transport in Each Contaminated Area

At the time of the assessment, the Phase Two Property was undeveloped and covered with pasture hay crops. No subsurface structures or underground utilities were observed or expected at the Phase Two Property.

6.10.5 Potential Contaminant Sources, Transport Pathways, Human and Ecological Receptors, Receptor Exposure Point and Routes of Exposure

There is no contamination greater than the applicable MECP Table 2 Standards at the Phase Two Property. Hence there is minimum possibilities of potential contaminants for transportation into the human and ecological systems.

6.10.5.1 The Release Mechanisms

There is no contamination greater than the applicable MECP Table 2 Standards at the Phase Two Property. However a controlled release of dewatering the groundwater in the vicinity of BH/MW-04 is recommended.

6.10.5.2 Contaminant Transport Pathway

There is no contamination greater than the applicable MECP Table 2 Standards at the Phase Two Property. Hence there is limited possibilities of transportation pathways in the vicinity of Phase Two Property.

6.10.5.3 The Human and Ecological Receptors Located on, in or under the Phase Two Property

There is no contamination greater than the applicable MECP Table 2 Standards at the Phase Two Property. Hence very limited potential to human and ecological receptors at the Phase Two Property.

6.10.5.4 Receptor Exposure Point

No direct exposure were identified due to no contamination found greater than the applicable MECP Table 2 Standards, at the Phase Two Property.

6.10.5.5 Routes of Exposure

There is no contamination greater than the applicable MECP Table 2 Standards at the Phase Two Property.

6.10.6 Non-Standard Delineation

The concentration of the tested parameters in the Soil and Groundwater samples were below the applicable site conditions standards (MECP Table 2 Standards).

6.10.7 Application of Exemption set in Paragraph 1, 1.1 or 2 of Section 49

The concentration of the de-icing salt related parameters in the Soil and Groundwater samples were below the applicable site conditions standards (MECP Table 2 Standards) and hence no exemption requirements were triggered.

6.10.8 Application of Exemption set in Paragraph 3 of Section 49

Exemption set out in paragraph 3 of section 49.1 of the regulation was not used for assessing the Phase Two Property.

7.0 CONCLUSIONS

This Phase Two ESA study was conducted to address the APECs identified on the Phase One Property and listed in the above table.

The field investigations for the Phase Two ESA were conducted between June 19 and 21, 2024. These investigations involved drilling four boreholes (BH/MW-101, BH/MW-102, BH/MW-103, and BH/MW-104) to a maximum depth of 9.3 meters below ground surface (mbgs). Additionally, six (6) soil samples were taken using a hand auger to a maximum depth of 1 meter below ground surface (mbgs).

Four (4) monitoring wells (BH/MW-101, BH/MW-102, BH/MW-103, and BH/MW-104) were installed in the newly drilled boreholes at the Site for groundwater observation, sampling, and testing.

Fill material and topsoil were encountered at the ground surface at the borehole locations. The general stratigraphy at the Phase Two Property, as observed in the boreholes, generally consisted of silty sand to silty sand till below the fill and topsoil material. The final depth of the native till deposit was not determined as the boreholes were terminated within this layer at a maximum depth of 9.3 mbgs.

Based on the groundwater elevation data obtained on July 04, 2024, the inferred groundwater flow direction is determined to the southeast. Based on the groundwater measurements, the calculated horizontal hydraulic gradient for the investigated aquifer at the Phase Two Property were 0.0015 m/m, 0.02597 m/m and 0.0174 m/m (average 0.0150 m/m). The vertical hydraulic gradient was not calculated as the second aquifer was not encountered at the depths investigated during this Phase Two ESA study.

Based on visual inspection, it was identified that no free product or oily sheen was observed in any of the monitoring wells.

Soil and groundwater samples, including duplicate samples and QA/QC samples, were submitted to AGAT Laboratories for analysis of one or more of the following contaminants of potential concern (COCs): petroleum hydrocarbons Fractions 1 to 4 (PHCs) including benzene, toluene, ethylbenzene and Xylenes (BTEX), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), and metals and inorganic (M&I) parameters [(As, Sb, Se, Na, B-HWS, Cl-, CN-, Cr-VI, Hg, low or high pH, electrical conductivity (EC) and sodium adsorption ratio (SAR)].

For assessment purposes, SIRATI selected the Ontario Ministry of the Environment, Conservation and Parks (MECP) 2011 Table 9: Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition for residential/parkland/institutional/Industrial/Commercial/Community property use with coarse-textured soils (MECP Table 9 Standards).

A review of the soil and groundwater sample analytical results during the investigation indicated that the concentration of the tested parameter in the soil and groundwater samples meets the MECP Table 9 Standards except TCE in water for BH/MW-04.

Based on the information of the Phase Two ESA, SIRATI is of the opinion that the Phase Two Property is in exceeding MECP Table 9 Standards for groundwater in one Monitoring well and as such, confirmatory groundwater sampling is recommended.

The statements made in this Executive Summary are subject to the same limitations as contained in the report and should be read in conjunction with the entire report.

8.0 SIGNATURES

All activities of this Phase Two ESA were completed under the supervision of the Qualified Person (QP), Archie Sirati, Ph.D., P.Eng., $QP_{ESA,}$ as defined by O.Reg. 153/04, as amended. In addition, the QP prepared the Conceptual Site Model, in accordance with Part VII of the Regulation.

Should you have any questions regarding the information presented or limitation set in this report, please do not hesitate to contact our office.

Yours truly,

Sirati and Partners Consultants Ltd.

Fuzail Patel
Junior Environmental Technician

Archie Sirati, Ph.D., P.Eng., QP_{ESA}
Principal

9.0 LIMITATIONS AND USE OF THE REPORT

This report was produced for the sole use of the Client and may not be relied upon by any other person or entity without the written authorization of SIRATI.

This report was prepared by SIRATI for the sole purpose of identifying potential environmental constraints pertinent to the western portion of the above-listed property, including likelihood of environmental impacts on the soil and groundwater as a result of current and past uses of the Property. This report shall not be relied upon or transferred to any other party without the express written authorisation of SIRATI. It may contain material subject to copyright or obtained subject to license; unauthorised copying of this report will be in breach of copyright/license.

The findings and opinions provided in this document are given in good faith and are subject to the limitations imposed by employing assessment methods and techniques, appropriate to the time of derivation and within the limitations and constraints defined within this document. The findings and opinions are relevant to the dates when the report was written but should not necessarily be relied upon to be appropriate at a substantially later date. In particular, changes to model algorithms and input parameters as a result of more recent publication by the authorities such as MECP, may affect the conceptual understanding upon which the Assessment Criteria (AC) were derived. The assessment should therefore not be considered as a comprehensive audit that would eliminate all environmental risks associated with the subject Property. The conclusions arrived at, and assessment of subsurface conditions were based on information collected at the time of conducting the fieldwork at specific borehole/test-pit/ sampling points and/or monitoring well locations. The actual subsurface conditions may vary.

Factual information has largely been obtained from authoritative sources; however, where authoritative information is unavailable or is in draft format, modification to the input data maybe required as and when authoritative information is published. Where such information might impact upon stated opinions, SIRATI reserves the right to modify such opinions expressed herein.

The findings and opinions conveyed, via this report, are based on information obtained from a variety of sources as detailed in this report, and which SIRATI assumes to be reliable, but have not been independently confirmed. Therefore, SIRATI cannot and does not guarantee the authenticity or reliability of third-party information it has relied upon.

Where opinions expressed in this report are based on current available guidelines and legislation, no liability can be accepted by SIRATI for the effects of any future changes to such guidelines and legislation.

This information given herein should be read in conjunction with the contract documents. Any contradiction in sampling regime should be addressed by the project leader or contract manager.

This document has been prepared for use by SIRATI in support of projects undertaken by SIRATI and should not be relied upon or used for any other party's project without an independent check being carried out as to its suitability and prior written authorisation being obtained from SIRATI.

SIRATI accepts no responsibility or liability for the consequences of the use of this document, wholly or in part, for any other purpose than that for which it was completed. Any persons so using or relying upon this document for such other purpose do so at their own risk.

FIGURES

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

SIRATI & PARTNERS
160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

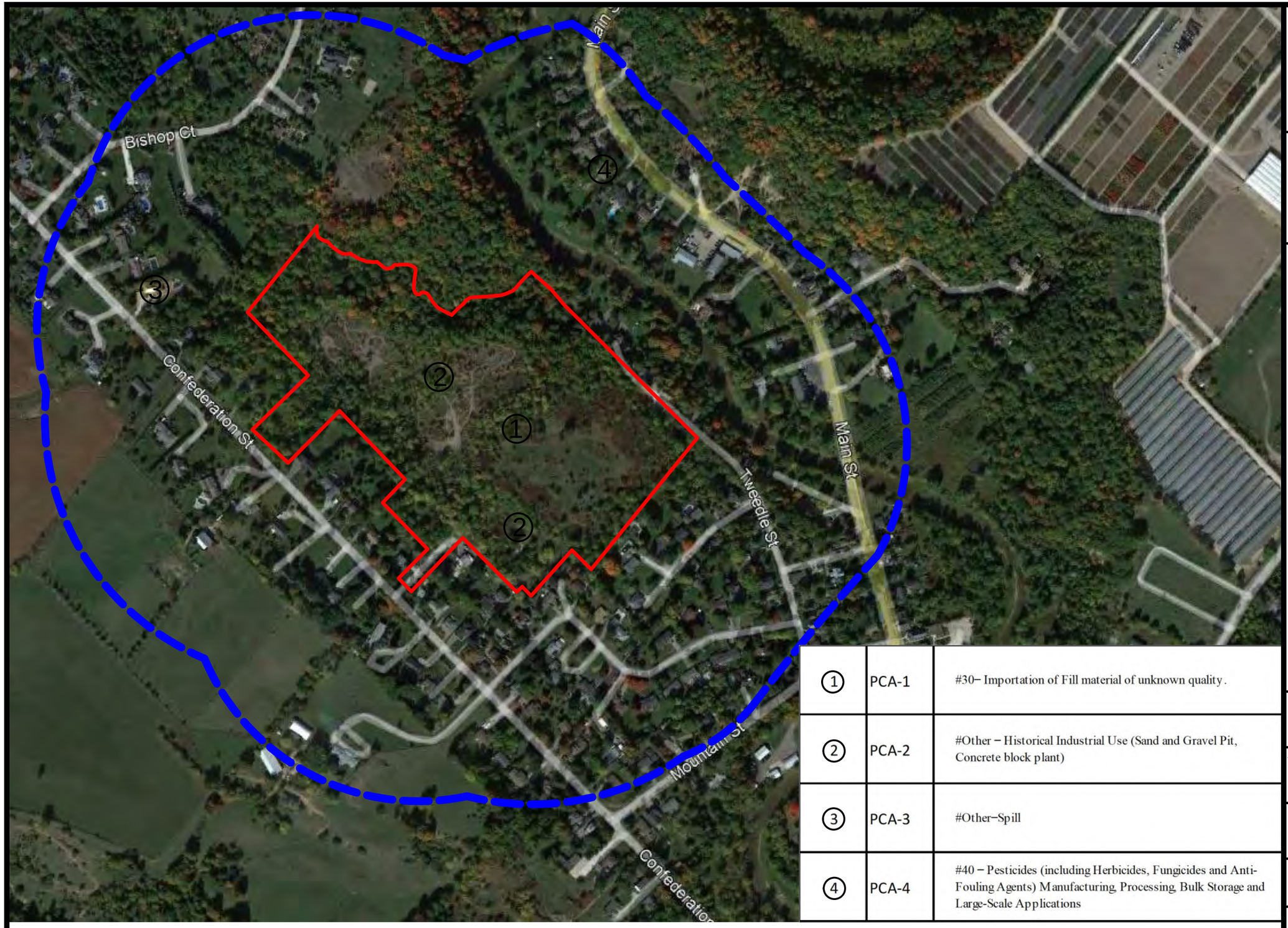
- Approximate Property Boundary
- 250 M Study Area
- Inferred Shallow Groundwater Flow Direction

Project Title:
Phase Two Environmental Site Assessment

Site Location:
159 Confederation Street,
Halton Hills, Ontario

Figure Title:
Site Location Plan and Phase Two Study Area

Scale:	Project Number:
As Shown	SP23-01265-01
Date:	**Figure Number:**
July, 2024	1



1	PCA-1	#30– Importation of Fill material of unknown quality.
2	PCA-2	#Other – Historical Industrial Use (Sand and Gravel Pit, Concrete block plant)
3	PCA-3	#Other–Spill
4	PCA-4	#40 – Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications

Source: Google Earth Map

0 100 m

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Markham, ON. L3R 9T9
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North:

Legend:

Approximate Property Boundary

250 M Study Area

Project Title:
Phase Two Environmental Site Assessment

Site Location:
159 Confederation Street,
Halton Hills, Ontario

Figure Title:
Potentially Contaminating Activities (PCA's) on the Phase Two Study Area

Scale:	Project Number:
As Shown	SP23-01265-01
Date:	**Figure Number:**
July, 2024	2

Source: Google Earth Map

0 m 25

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Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

Approximate Property Boundary

159 Confederation Street, Halton Hills, Ontario

APEC-1		#30– Importation of Fill material of unknown quality
APEC-2		#Other – Historical Industrial Use (Sand and Gravel Pit, Concrete block plant)

Project Title:

Phase Two Environmental Site Assesment

Site Location:

159 Confederation Street,
Halton Hills, Ontario

Figure Title:

Area of Potential Environmental Concerns (APECs) on the Phase Two Study Area

Scale: As Shown	**Project Number:** SP23-01265-01
Date: July, 2024	**Figure Number:** 3

Source: Google Earth Map

m
0 50

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160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

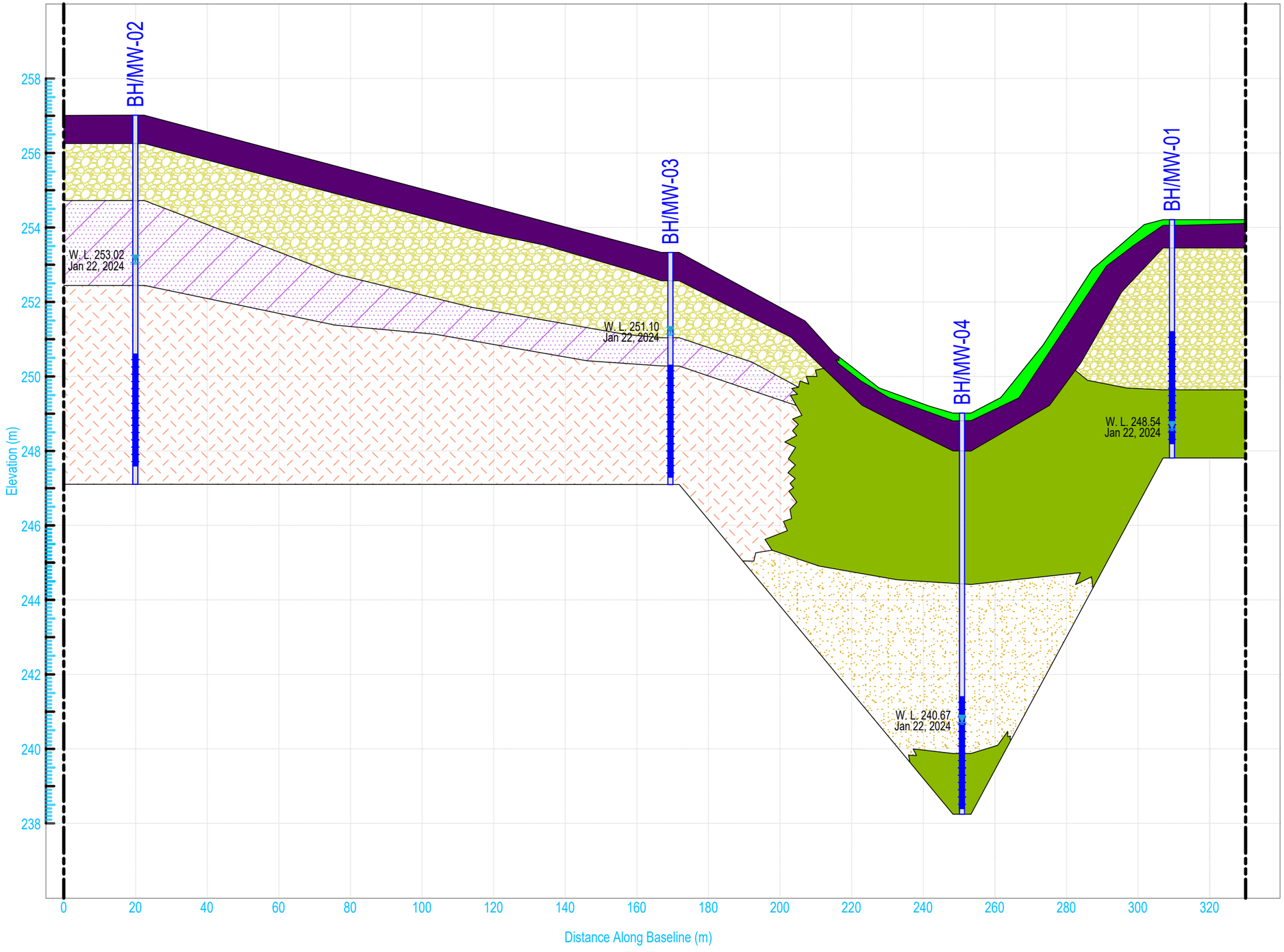
- Approximate Property Boundary
- Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

Project Title:
Phase Two Environmental Site Assessment

Site Location:
159 Confederation Street,
Halton Hills, Ontario

Figure Title:
Borehole/ Monitoring Well Location Plan

Scale:	Project Number:
As Shown	SP23-01265-01
Date:	**Figure Number:**
July, 2024	4



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Legend:

- Approximate Property Boundary
- Topsoil
- Fill
- Sand & Gravel
- Silty Sand Till
- Sandy Silt
- Sand
- Sand & Silt Till
- BH/MW-XX — Borehole / Well ID
- Water Level
- Well Screen

Note: Groundwater Elevation were obtained on January 22, 2024

Project Title:

Phase Two Environmental Site Assessment

Site Location:

159 Confederation Street, Halton Hills, ON.

Figure Title:

Geologic Cross Section A - A'

Scale:	Project Number:
N.T.S	SP23-01265-00
Date:	**Figure Number:**
February, 2024	5

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Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Contour Line
- Inferred Shallow Groundwater Flow Direction
- Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

Note: Groundwater Elevation were obtained on July 04, 2024

Project Title:

Phase Two Environmental Site Assessment

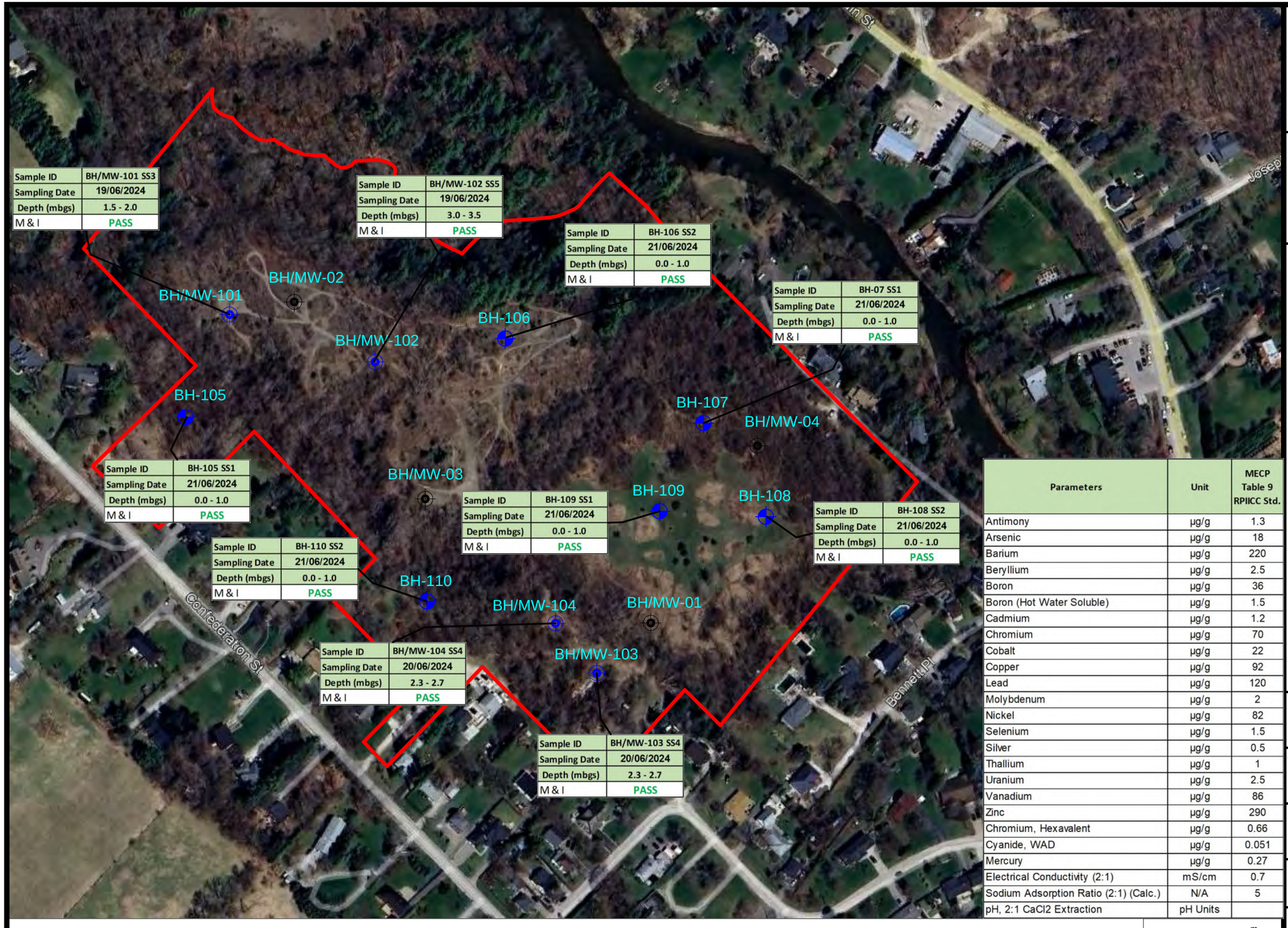
Site Location:

159 Confederation Street,
Halton Hills, Ontario

Figure Title:

Inferred Shallow Groundwater Flow Direction Map

Scale:	Project Number:
As Shown	SP23-01265-01
Date:	**Figure Number:**
July, 2024	6



Parameters	Unit	MECP Table 9 RPIICC Std.
Antimony	µg/g	1.3
Arsenic	µg/g	18
Barium	µg/g	220
Beryllium	µg/g	2.5
Boron	µg/g	36
Boron (Hot Water Soluble)	µg/g	1.5
Cadmium	µg/g	1.2
Chromium	µg/g	70
Cobalt	µg/g	22
Copper	µg/g	92
Lead	µg/g	120
Molybdenum	µg/g	2
Nickel	µg/g	82
Selenium	µg/g	1.5
Silver	µg/g	0.5
Thallium	µg/g	1
Uranium	µg/g	2.5
Vanadium	µg/g	86
Zinc	µg/g	290
Chromium, Hexavalent	µg/g	0.66
Cyanide, WAD	µg/g	0.051
Mercury	µg/g	0.27
Electrical Conductivity (2:1)	mS/cm	0.7
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5
pH, 2:1 CaCl2 Extraction	pH Units	

Source: Google Earth Map

0 m 50

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North:

Legend:

- Approximate Property Boundary
- Handaugured Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

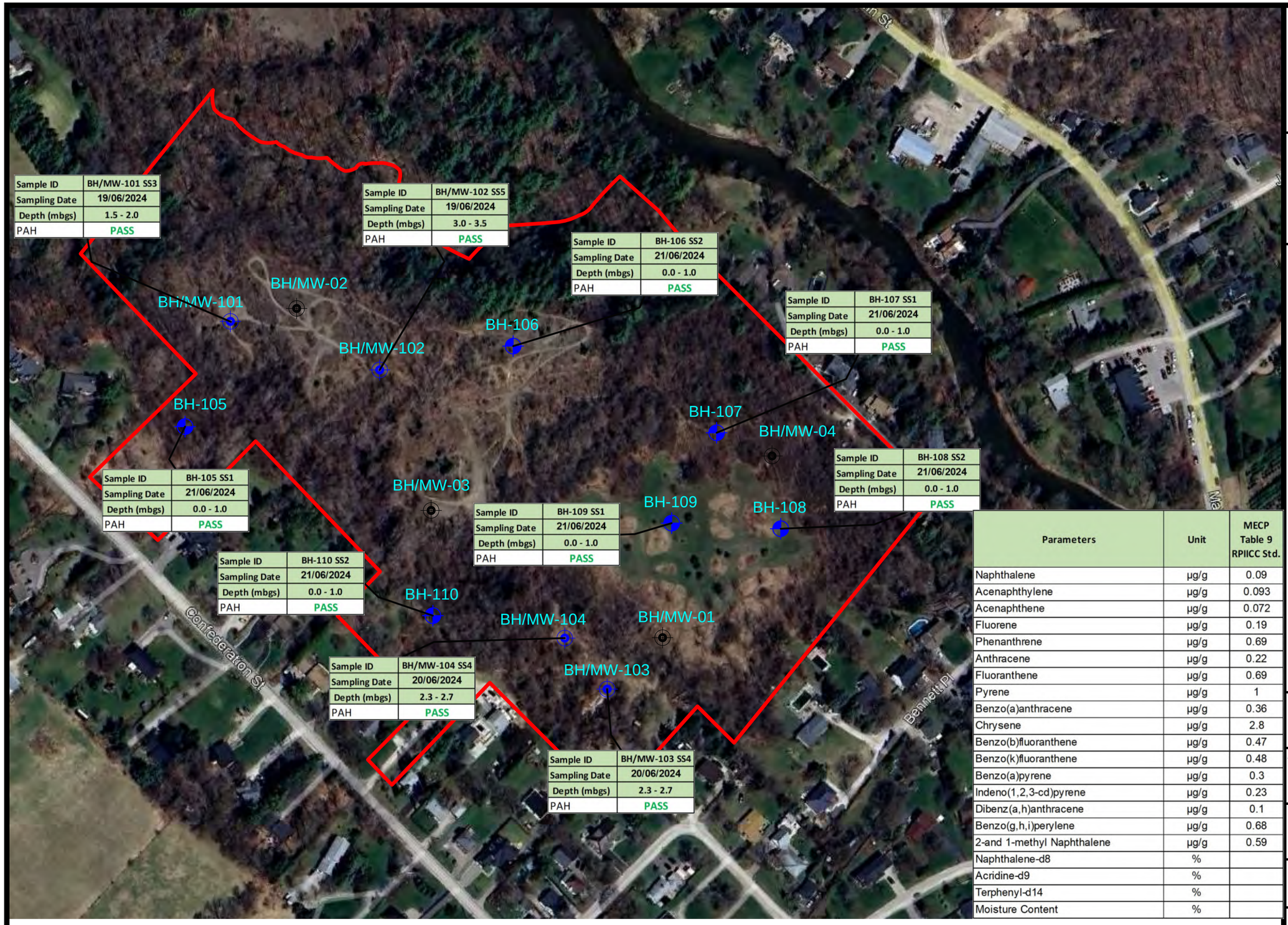
Notes:- The results were compared against the MECP Table 9 RPIICC Standards

Project Title:
Phase Two Environmental Site Assesment

Site Location:
159 Confederation Street,
Halton Hills, Ontario

Figure Title:
Plan View of Chemical Concentration in Soil M&I

Scale:	Project Number:
As Shown	SP23-01265-01
Date:	**Figure Number:**
July, 2024	7-1



Source: Google Earth Map

Parameters	Unit	MECP Table 9 RPIICC Std.
Naphthalene	µg/g	0.09
Acenaphthylene	µg/g	0.093
Acenaphthene	µg/g	0.072
Fluorene	µg/g	0.19
Phenanthrene	µg/g	0.69
Anthracene	µg/g	0.22
Fluoranthene	µg/g	0.69
Pyrene	µg/g	1
Benzo(a)anthracene	µg/g	0.36
Chrysene	µg/g	2.8
Benzo(b)fluoranthene	µg/g	0.47
Benzo(k)fluoranthene	µg/g	0.48
Benzo(a)pyrene	µg/g	0.3
Indeno(1,2,3-cd)pyrene	µg/g	0.23
Dibenz(a,h)anthracene	µg/g	0.1
Benzo(g,h,i)perylene	µg/g	0.68
2-and 1-methyl Naphthalene	µg/g	0.59
Naphthalene-d8	%	
Acridine-d9	%	
Terphenyl-d14	%	
Moisture Content	%	

0 50 m

SIRATI & PARTNERS
160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Handaugured Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

Notes:- The results were compared against the MECP Table 9 RPICC Standards

Project Title:
Phase Two Environmental Site Assesment

Site Location:
159 Confederation Street,
Halton Hills, Ontario

Figure Title:
Plan View of Chemical Concentration in Soil
PAH

Scale:	Project Number:
As Shown	SP23-01265-01
Date:	**Figure Number:**
July, 2024	7-2

Parameters	Unit	MECP Table 9 RPIICC Std.
F1 (C6 to C10)	µg/g	
F1 (C6 to C10) minus BTEX	µg/g	25
Toluene-d8	%	
F2 (C10 to C16)	µg/g	10
F2 (C10 to C16) minus Naphthalene	µg/g	
F3 (C16 to C34)	µg/g	240
F3 (C16 to C34) minus PAHs	µg/g	
F4 (C34 to C50)	µg/g	120
Gravimetric Heavy Hydrocarbons	µg/g	120
Moisture Content	%	
Terphenyl	%	

0 50 m

Source: Google Earth Map

SIRATI & PARTNERS
160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Handaugured Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

Notes:- The results were compared against the MECP Table 9 RPIICC Standards

Project Title:
Phase Two Environmental Site Assesment

Site Location:
159 Confederation Street,
Halton Hills, Ontario

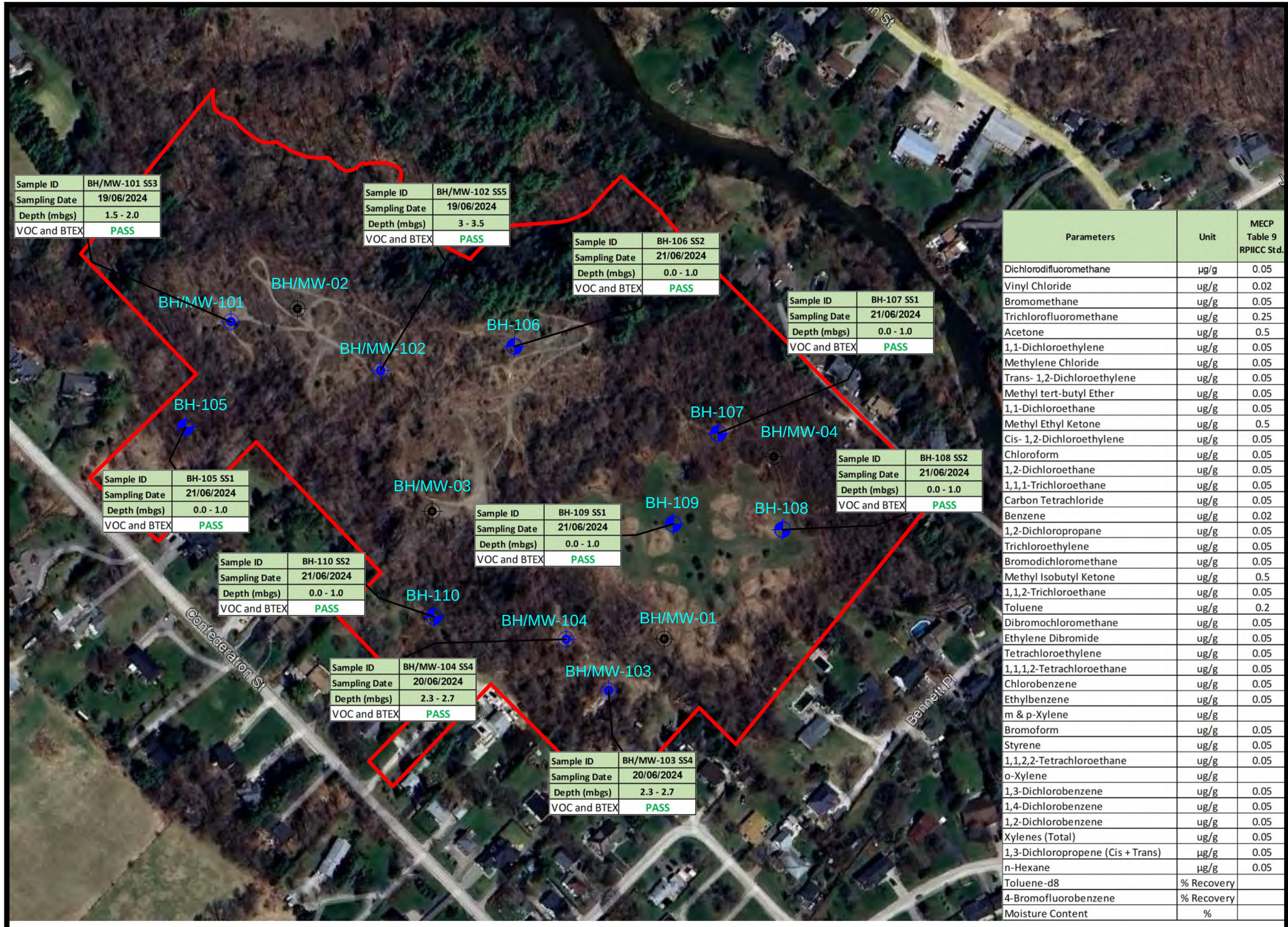
Figure Title:
Plan View of Chemical Concentration in Soil PHC

Scale: As Shown

Project Number: SP23-01265-01

Date: July, 2024

Figure Number: 7-3



Parameters	Unit	MECP Table 9 RPIICC Std.
Dichlorodifluoromethane	µg/g	0.05
Vinyl Chloride	ug/g	0.02
Bromomethane	ug/g	0.05
Trichlorofluoromethane	ug/g	0.25
Acetone	ug/g	0.5
1,1-Dichloroethylene	ug/g	0.05
Methylene Chloride	ug/g	0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05
Methyl tert-butyl Ether	ug/g	0.05
1,1-Dichloroethane	ug/g	0.05
Methyl Ethyl Ketone	ug/g	0.5
Cis- 1,2-Dichloroethylene	ug/g	0.05
Chloroform	ug/g	0.05
1,2-Dichloroethane	ug/g	0.05
1,1,1-Trichloroethane	ug/g	0.05
Carbon Tetrachloride	ug/g	0.05
Benzene	ug/g	0.02
1,2-Dichloropropane	ug/g	0.05
Trichloroethylene	ug/g	0.05
Bromodichloromethane	ug/g	0.05
Methyl Isobutyl Ketone	ug/g	0.5
1,1,2-Trichloroethane	ug/g	0.05
Toluene	ug/g	0.2
Dibromochloromethane	ug/g	0.05
Ethylene Dibromide	ug/g	0.05
Tetrachloroethylene	ug/g	0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05
Chlorobenzene	ug/g	0.05
Ethylbenzene	ug/g	0.05
m & p-Xylene	ug/g	
Bromoform	ug/g	0.05
Styrene	ug/g	0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05
o-Xylene	ug/g	
1,3-Dichlorobenzene	ug/g	0.05
1,4-Dichlorobenzene	ug/g	0.05
1,2-Dichlorobenzene	ug/g	0.05
Xylenes (Total)	ug/g	0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05
n-Hexane	µg/g	0.05
Toluene-d8	% Recovery	
4-Bromofluorobenzene	% Recovery	
Moisture Content	%	

Source: Google Earth Map

0 50 m

SIRATI & PARTNERS
160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Handaugured Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

Notes:- The results were compared against the MECP Table 9 RPIICC Standards

Project Title:
Phase Two Environmental Site Assesment

Site Location:
159 Confederation Street,
Halton Hills, Ontario

Figure Title:
Plan View of Chemical Concentration in Soil
VOC and BTEX

Scale:	Project Number:
As Shown	SP23-01265-01
Date:	**Figure Number:**
July, 2024	7-4

Parameters	Unit	MECP Table 9 RPIICC Std.
Polychlorinated Biphenyls	µg/g	0.3
Decachlorobiphenyl	%	
Moisture Content	%	

0 50 m

Source: Google Earth Map

SIRATI & PARTNERS
160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Handaugured Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

Notes:- The results were compared against the MECP Table 9 RPIICC Standards

Project Title:

Phase Two Environmental Site Assesment

Site Location:

159 Confederation Street,
Halton Hills, Ontario

Figure Title:

Plan View of Chemical Concentration in Soil PCB

Scale:	Project Number:
As Shown	SP23-01265-01
Date:	**Figure Number:**
July, 2024	7-5

Parameters	Unit	MECP Table 9 RPIICC Std.
Naphthalene	µg/L	1400
Acenaphthylene	µg/L	1.4
Acenaphthene	µg/L	600
Fluorene	µg/L	290
Phenanthrene	µg/L	380
Anthracene	µg/L	1
Fluoranthene	µg/L	73
Pyrene	µg/L	5.7
Benzo(a)anthracene	µg/L	1.8
Chrysene	µg/L	0.7
Benzo(b)fluoranthene	µg/L	0.75
Benzo(k)fluoranthene	µg/L	0.4
Benzo(a)pyrene	µg/L	0.81
Indeno(1,2,3-cd)pyrene	µg/L	0.2
Dibenz(a,h)anthracene	µg/L	0.4
Benzo(g,h,i)perylene	µg/L	0.2
2-and 1-methyl Napthalene	µg/L	1500
Naphthalene-d8	%	
Acridine-d9	%	
Terphenyl-d14	%	
Sediment		

Source: Google Earth Map

SIRATI & PARTNERS
160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Handaugured Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

Notes:- The results were compared against the MECP Table 9 RPIICC Standards

Project Title:

Phase Two Environmental Site Assesment

Site Location:

159 Confederation Street,
Halton Hills, Ontario

Figure Title:

Plan View of Chemical Concentration in Groundwater PAHs

Scale:	Project Number:
As Shown	SP23-01265-01
Date:	**Figure Number:**
July, 2024	8-1

Parameters	Unit	MECP Table 9 RPIICC Std.
Polychlorinated Biphenyls	µg/L	0.2
Decachlorobiphenyl	%	

0 50 m

Source: Google Earth Map

SIRATI & PARTNERS
160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Handaugured Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

Notes:- The results were compared against the MECP Table 9 RPIICC Standards

Project Title:
Phase Two Environmental Site Assesment

Site Location:
159 Confederation Street,
Halton Hills, Ontario

Figure Title:
Plan View of Chemical Concentration in Groundwater PCBs

Scale: As Shown

Project Number: SP23-01265-01

Date: July, 2024

Figure Number: 8-2

Source: Google Earth Map

Parameters	Unit	MECP Table 9 RPIICC Std.
F1 (C6 to C10)	µg/L	
F1 (C6 to C10) minus BTEX	µg/L	420
Toluene-d8	%	
F2 (C10 to C16)	µg/L	150
F2 (C10 to C16) minus Naphthalene	µg/L	
F3 (C16 to C34)	µg/L	500
F3 (C16 to C34) minus PAHs	µg/L	
F4 (C34 to C50)	µg/L	500
Gravimetric Heavy Hydrocarbons	µg/L	
Terphenyl	% Recovery	
Sediment		

0 50 m

SIRATI & PARTNERS
160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Handaugured Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

Notes:- The results were compared against the MECP Table 9 RPIICC Standards

Project Title:
Phase Two Environmental Site Assesment

Site Location:
159 Confederation Street,
Halton Hills, Ontario

Figure Title:
Plan View of Chemical Concentration in Groundwater PHCs

Scale: As Shown

Project Number: SP23-01265-01

Date: July, 2024

Figure Number: 8-3

Source: Google Earth Map

Parameters	Unit	MECP Table 9 RPIICC Std.
Dichlorodifluoromethane	µg/L	3500
Vinyl Chloride	µg/L	0.5
Bromomethane	µg/L	5.6
Trichlorofluoromethane	µg/L	2000
Acetone	µg/L	100000
1,1-Dichloroethylene	µg/L	1.6
Methylene Chloride	µg/L	610
trans- 1,2-Dichloroethylene	µg/L	1.6
Methyl tert-butyl ether	µg/L	190
1,1-Dichloroethane	µg/L	320
Methyl Ethyl Ketone	µg/L	470000
cis- 1,2-Dichloroethylene	µg/L	1.6
Chloroform	µg/L	2.4
1,2-Dichloroethane	µg/L	1.6
1,1,1-Trichloroethane	µg/L	640
Carbon Tetrachloride	µg/L	0.79
Benzene	µg/L	44
1,2-Dichloropropane	µg/L	16
Trichloroethylene	µg/L	1.6
Bromodichloromethane	µg/L	67000
Methyl Isobutyl Ketone	µg/L	140000
1,1,2-Trichloroethane	µg/L	4.7
Toluene	µg/L	14000
Dibromochloromethane	µg/L	65000
Ethylene Dibromide	µg/L	0.25
Tetrachloroethylene	µg/L	1.6
1,1,1,2-Tetrachloroethane	µg/L	3.3
Chlorobenzene	µg/L	500
Ethylbenzene	µg/L	1800
m & p-Xylene	µg/L	
Bromoform	µg/L	380
Styrene	µg/L	1300
1,1,2,2-Tetrachloroethane	µg/L	3.2
o-Xylene	µg/L	
1,3-Dichlorobenzene	µg/L	7600
1,4-Dichlorobenzene	µg/L	8
1,2-Dichlorobenzene	µg/L	4600
1,3-Dichloropropene	µg/L	5.2
Xylenes (Total)	µg/L	3300
n-Hexane	µg/L	51
Toluene-d8	% Recovery	
4-Bromofluorobenzene	% Recovery	

0 50 m

SIRATI & PARTNERS
160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Handaugured Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

Notes:- The results were compared against the MECP Table 9 RPIICC Standards

Project Title:
Phase Two Environmental Site Assesment

Site Location:
159 Confederation Street,
Halton Hills, Ontario

Figure Title:
Plan View of Chemical Concentration in Groundwater VOCs and BTEX

Scale:	Project Number:
As Shown	SP23-01265-01
Date:	**Figure Number:**
July, 2024	8-4

Sample ID	BH/MW-102
Sampling Date	04/07/2024
Depth (mbgs)	7.2
M&I	PASS

Sample ID	BH/MW-04
Sampling Date	04/07/2024
Depth (mbgs)	9.9
M&I	PASS

Sample ID	BH/MW-103
Sampling Date	04/07/2024
Depth (mbgs)	8.2
M&I	PASS

Parameters	Unit	MECP Table 9 RPIICC Std.
Dissolved Antimony	µg/L	16000
Dissolved Arsenic	µg/L	1500
Dissolved Barium	µg/L	23000
Dissolved Beryllium	µg/L	53
Dissolved Boron	µg/L	36000
Dissolved Cadmium	µg/L	2.1
Dissolved Chromium	µg/L	640
Dissolved Cobalt	µg/L	52
Dissolved Copper	µg/L	69
Dissolved Lead	µg/L	20
Dissolved Molybdenum	µg/L	7300
Dissolved Nickel	µg/L	390
Dissolved Selenium	µg/L	50
Dissolved Silver	µg/L	1.2
Dissolved Thallium	µg/L	400
Dissolved Uranium	µg/L	330
Dissolved Vanadium	µg/L	200
Dissolved Zinc	µg/L	890
Mercury	µg/L	0.29
Chromium VI	µg/L	110
Cyanide, WAD	µg/L	52
Dissolved Sodium	µg/L	1800000
Chloride	µg/L	1800000
Electrical Conductivity	uS/cm	NA
pH	pH Units	

Source: Google Earth Map

0 50 m

SIRATI & PARTNERS
160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Handaugured Borehole
- Borehole/Monitoring Well 2024
- Borehole/Monitoring Well 2023

Notes:- The results were compared against the MECP Table 9 RPIICC Standards

Project Title:
Phase Two Environmental Site Assesment

Site Location:
159 Confederation Street,
Halton Hills, Ontario

Figure Title:
Plan View of Chemical Concentration in Groundwater M&I

Scale:	Project Number:
As Shown	SP23-01265-01
Date:	**Figure Number:**
July, 2024	8-5

APPENDICES

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

APPENDIX A

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

SCHEDULE				
PART	LOT	PLAN	PIN	AREA (sq.m.)
1	PART OF LOT 26	REGISTRAR'S COMPILED PLAN No. 1555	ALL OF PIN 25011-0064 (LT)	120886±
2				980
3				781

PART 2 - SUBJECT TO A RIGHT-OF-WAY AS IN INST. No.'s 242783 AND 701169.
PART 3 - SUBJECT TO A RIGHT-OF-WAY AS IN INST. No. 701169.

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE LAND TITLES ACT.

DATE _____

THOMAS J. SALB
ONTARIO LAND SURVEYOR

PLAN 20R-

RECEIVED AND DEPOSITED

DATE _____

REPRESENTATIVE FOR THE LAND REGISTRAR FOR THE LAND TITLES DIVISION OF HALTON (No. 20)

PLAN OF SURVEY OF

PART OF LOT 26
REGISTRAR'S COMPILED PLAN No. 1555

FORMALLY PART OF WEST HALF OF LOT 22, CONCESSION 10
GEOGRAPHIC TOWNSHIP OF ESQUESING
IN THE
TOWN OF HALTON HILLS
REGIONAL MUNICIPALITY OF HALTON

SCALE 1 : 1000

20 0 20 40 60 metres

J.D. BARNES LIMITED

METRIC DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTES

BEARINGS ARE UTM GRID, DERIVED FROM OBSERVED REFERENCE POINTS A AND B, BY REAL TIME NETWORK (RTN) OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0).

FOR BEARING COMPARISONS, A ROTATION OF 00°40'15" COUNTER-CLOCKWISE WAS APPLIED TO BEARINGS ON PLAN 20R-8779.

FOR BEARING COMPARISONS, A ROTATION OF 00°45'35" COUNTER-CLOCKWISE WAS APPLIED TO BEARINGS ON PLAN 20R-9284 AND 20R-6532.

FOR BEARING COMPARISONS, A ROTATION OF 00°45'50" CLOCKWISE WAS APPLIED TO BEARINGS ON PLAN 20R-5977 AND 20R-10733.

FOR BEARING COMPARISONS, A ROTATION OF 00°44'45" COUNTER-CLOCKWISE WAS APPLIED TO BEARINGS ON PLAN P8.

FOR BEARING COMPARISONS, A ROTATION OF 00°40'20" CLOCKWISE WAS APPLIED TO BEARINGS ON PLAN 20M-765.

INTEGRATION DATA

OBSERVED REFERENCE POINTS (ORPs): UTM ZONE 17, NAD83 (CSRS) (2010.0).

COORDINATES TO URBAN ACCURACY PER SECTION 14 (2) OF O.REG 216/10.

POINT ID	EASTING	NORTHING
ORP (A)	585 766.79	4 836 310.82
ORP (B)	586 020.15	4 836 055.88
ORP (C)	586 123.76	4 836 469.33

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

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999658.

LEGEND

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT SET
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
RIB	DENOTES	ROUND IRON BAR
IB	DENOTES	IRON BAR
IP	DENOTES	IRON PIPE
WIT	DENOTES	WITNESS
MEAS	DENOTES	MEASURED
JDB	DENOTES	J.D. BARNES LIMITED
375	DENOTES	BLACK, SHOEMAKER, ROBINSON & DONALDSON LIMITED
752	DENOTES	W.H. CARR, O.L.S.
1254	DENOTES	R.E. CLIPSHAM LIMITED
1312	DENOTES	JOSEPH STEL, O.L.S.
1521	DENOTES	DOLLIVER SURVEYING INC.
OU	DENOTES	ORIGIN UNKNOWN
P1	DENOTES	PLAN 20R-8779
P2	DENOTES	PLAN 20R-14513
P3	DENOTES	PLAN 20R-5977
P4	DENOTES	PLAN 20R-10733
P5	DENOTES	REGISTERED PLAN 20M-765
P6	DENOTES	PLAN 20R-9284
P7	DENOTES	PLAN 20R-6532
P8	DENOTES	SURVEYOR'S REAL PROPERTY REPORT BY DOLLIVER SURVEYING INC. DATED NOVEMBER 11, 2011
P9	DENOTES	REGISTERED PLAN 510
P10	DENOTES	INSTRUMENT NUMBER 242783
P11	DENOTES	INSTRUMENT NUMBER 415702
P12	DENOTES	PLAN 20R-19875
P13	DENOTES	PLAN 20R-4866
P14	DENOTES	SURVEYOR'S REAL PROPERTY REPORT BY R.E. CHIPSHAM, O.L.S. DATED OCTOBER, 1990
P15	DENOTES	PLAN 20R-11716
HP	DENOTES	HYDRO POLE
PWF	DENOTES	POST & WIRE FENCE
S.T. R.O.W.	DENOTES	SUBJECT TO A RIGHT OF WAY

ALL SET SSIB AND PB MONUMENTS WERE USED DUE TO LACK OF OVERBURDEN AND/OR PROXIMITY OF UNDERGROUND UTILITIES IN ACCORDANCE WITH SECTION 11 (4) OF O.REG. 525/91.

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 LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 28th DAY OF SEPTEMBER, 2023.

DATE — THOMAS J. SALB, ONTARIO LAND SURVEYOR

J.D. BARNES LIMITED — SURVEYING MAPPING GIS
LAND INFORMATION SPECIALISTS
401 WHEELABRATOR WAY, SUITE A, MILTON, ON L9T 3C1
T: (905) 875-9955 F: (905) 875-9956 www.jdbarnes.com

DRAWN BY:	CHECKED BY:	REFERENCE NO.:
AP&MD		14-30-651-00-A

FILE: G:\14-30-651\03\Drawing\14-30-651-03-a.dgn DATED: OCTOBER 31, 2023

PLOTTED: OCTOBER 31, 2023

APPENDIX B

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

SAMPLING AND ANALYSIS PLAN

This Sampling and Analysis Plan is prepared for a Phase Two Environmental Site Assessment (Phase Two ESA) as defined by Ontario Regulation (O. Reg.) 153/04, as amended. The Phase Two Property is located at 159 Confederation Street, Halton Hills, Ontario. The total area of the Phase Two Property is approximately 122,647 m^2 (12.26 ha). Phase Two Property is undeveloped. The Site features and the location of the Phase Two Property is shown in Figure 1.

The Sampling and Analysis Plan is prepared based on the findings of our Phase One Environmental Site Assessments prepared by SIRATI for the Site, dated January 22, 2024 ("SIRATI 2024 Phase One ESA") in accordance with O.Reg.153/04.

- Phase One Environmental Site Assessment 159 Confederation Street, Brampton, Ontario, prepared by SIRATI, for Weston Consulting. Dated January 22, 2024 (SIRATI 2024 Phase One ESA).

1) OBJECTIVE

The objective of Phase Two ESA was to determine the soil quality at the Property, as related to the following Areas of Potential Environmental Concerns (APECs) identified in Phase One by SIRATI:

- APEC-1: The potential presence of imported fill material of unknown quality at the entire portion of the Site.
- APEC-2: The Historical use for the extraction of aggregate resources in the Northwest and south portions of the Site.

2) SCOPE OF WORK

The scope of work for this Phase Two ESA included, but was not limited to, the following tasks:

- Utility Locates: Prior to the advancement of the boreholes, arranged for the location of underground and overhead utilities, including electrical (hydro), natural gas, water supply, sanitary and storm sewer, telephone, cable and communication. Underground utilities were marked by local utility locates company representatives, and a private locator was retained to clear the borehole locations prior to the drilling of the boreholes;
- Drilled and collected soil samples at ten (10) locations (BH/MW-101, BH/MW-102, BH/MW-103, BH/MW-104, BH-105, BH-106, BH-107, BH-108, BH-109, and BH-110), logged and field screened the soil samples through visual inspection and field measurement of total organic vapors (TOV) of the soil samples, and the selection of soil samples for laboratory analysis;
- Utilize monitoring wells installed during previous hydrogeological/geological studies conducted by SIRATI and also drilled additional four (4) monitoring wells designated as (BH/MW-101,

BH/MW-102, BH/MW-103, BH/MW-104). The previously drilled wells were designated as BH/MW-01, BH/MW-02, BH/MW-03, and BH/MW-04 and were installed in general accordance with the Ontario Water Resources Act - RRO 1990, Regulation 903 - Amended to O. Reg. 128/03, by licensed well contractors Elements.);

- Developed the monitoring wells, purged and collected groundwater samples for laboratory analysis;
- Submitted soil and groundwater samples under the Chain of Custody protocol to the accredited laboratories to carry out chemical analyses for contaminants of potential concern (COCs) in accordance with O. Reg. 153/04 - "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act" published by the MECP and dated March 9, 2004, as amended by O. Reg. 511/09, s. 22 ("Analytical Protocol");
- Reviewed and interpreted laboratory results of chemical analysis data and observations made during the site investigations.
- Completed an evaluation of the information from the above and prepared a Phase Two Conceptual Site Model (CSM) to identify locations and concentrations of contaminants (if any) above the applicable Site Condition Standards at the Site; and
- Prepared a Phase Two ESA report of the investigation findings, conclusions and recommendations.

3) RATIONALE OF BOREHOLE AND MONITORING WELL LOCATIONS

The rationale for the selection of the borehole locations is presented in the Table below:

Area of Potential Environmental Concern	Location on Phase Two Property	Borehole ID
Potential fill material at the entire portion of the Site (APEC1)	Entire Site	BH-105, BH-106, BH-107, BH-108, BH-109, and BH-110
Historical use for the extraction of aggregate resources in the Northwest and south portions of the Site (APEC 2)	Northwest and south portion	BH/MW-101, BH/MW-102, BH/MW-103, and BH/MW-104

The rationale for the selection of monitoring well locations is presented in the Table below:

Area of Potential Environmental Concern	Location on Phase Two Property	MW ID
Potential fill material at the entire portion of the Site (APEC1)	Northern portion	BH/MW-04
Historical use for the extraction of aggregate resources in the Northwest and south portions of the Site (APEC 2)	Northwest and south portion	BH/MW-102, and BH/MW-103

4) SAMPLES (INCLUDING QA/QC SAMPLES) ANALYTICAL SCHEDULE

A summary of soil and groundwater samples (including QA/QC samples) submitted for chemical analysis is presented in the Table below:

Sampling Media	Borehole/ Monitoring well	M & I	PHCs/BTEX	PAHs	PCBs	VOCs
Soil	BH/MW-101	1	1	1	1	1
	BH/MW-102	1	1	1	1	1
	BH/MW-103	1	1	1	1	1
	BH/MW-104	1	1	1	1	1
	BH-105	1	1	1	1	1
	BH-106	1	1	1	1	1
	BH-107	1	1	1	1	1
	BH-108	1	1	1	1	1
	BH-109	1	1	1	1	1
	BH-110	1	1	1	1	1
Groundwater	BH/MW-04	1	1	1	1	1
	BH/MW-102	1	1	1	1	1
	BH/MW-103	1	1	1	1	1

5) SOIL AND GROUNDWATER SAMPLING PROCEDURES

SIRATI's Standard Operation Procedures (SOPs) will be followed throughout the field investigation (sampling, decontamination of equipment, observation and documentation), including the field QA/QC program. SPCL's Standard Operating Procedure is presented in section 7 of this sampling and analysis plan.

6) DATA QUALITY OBJECTIVES

Sampling and decontamination procedures, including QA/QC program, should be carried out in accordance with the following:

• SIRATI's Standard Operating Procedures, as presented in section 7 below Sampling and Analysis Plan.

• The "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", May 1996, revised December 1996, as amended by O. Reg. 511/09.

Laboratory analytical methods, protocols and procedures should be carried out in accordance with the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", dated March 9, 2004, amended as of July 1, 2011, in accordance with O.Reg. 1531/04 and O. Reg. 269/11.

Standard Operating Procedure

This Sampling and Analysis Plan is prepared for a Phase Two Environmental Site Assessment (Phase Two) as defined by Ontario Regulation (O. Reg.) 153/04, as amended.

STANDARD OPERATING PROCEDURES (SOPs)

1. Drilling and Test Pit Excavation

1.1 Underground Utilities

Prior to drilling or test pit excavation, the public utility service (One Call) and private utility services are contacted. The underground utility services are located and marked out in the field.

1.2 Test Pit and Trenches

Test pits and trenches are the simplest methods of observing subsurface soils. They consist of excavations performed by hand, backhoe, or dozer. Hand excavations are often performed with posthole diggers or shovels. They offer the advantages of speed and ready access for sampling. They are severely hampered by limitations of depth, and they cannot be used in soft or loose soils, boulders or below the water table.

Upon completion, the excavated test pit should be backfilled with the excavated material or other suitable soil material. The backfilled material should be compacted to avoid excessive future settlements. Tampers or rolling equipment may be used to facilitate the compaction of the backfill. Excavations within existing roadways should be backfilled with granular material and compacted in lifts to restore subgrade support, and the pavement should be properly patched.

Any test pit or excavated area located near planned structure footings or pavement must be surveyed to determine the precise location of the excavation. This information must be presented in Construction Plans and Special Provisions to ensure the area will be re-excavated and properly compacted to the extent required. In the case of test pits excavated through existing pavements, the pavement should be properly patched. The backfilled material should be compacted to avoid excessive future settlements. Tampers or rolling equipment may be used to facilitate the compaction of the backfill. Excavations within existing roadways should be backfilled with granular material and compacted in lifts to restore subgrade support.

Where pits are located in agricultural areas or other areas used to support plant growth, the backhoe operator should be instructed to keep the topsoil (or at least the finer upper layer of the profile) and overburden separate from any gravel encountered in the pit. Upon completion of the pit, the operator should backfill in a sequence (generally with the coarsest material in the bottom of the pit) such that the backfilled pit area is re-established to support vegetation.

1.3 Drilling Methods

Solid Flight Auger Borings

Auger borings are advanced into the ground by rotating the auger while simultaneously applying a downward force using either hydraulic or mechanical pressure. The auger is advanced to the desired depth and then withdrawn. Samples of cuttings can be removed from the auger; however, the depth of the sample can only be approximated. These samples are disturbed and should be used only for material identification. This method is generally used to establish shallow soil strata and water table elevations or to advance to the desired stratum before Standard Penetration Testing (SPT) or undisturbed sampling is performed. However, it cannot be used effectively in soft or loose soils below the water table. In addition, this method has limited capabilities in dense, rocky material where it may encounter refusal. See ASTMD 1452 (AASHTO T 203).

A solid stem auger consists of a pipe with spiral flanges welded to the pipe. Each section of an auger is referred to as a flight. Flights are typically 1.5 m long but may be longer, depending on the manufacturer. A pin is placed at the junction of each auger flight connecting one to the next.

Solid stem augers capable of drilling a hole as large as 1m in diameter are available; however, these larger sizes are not common.

The first auger flight is equipped with a bit of cutter or teeth for cutting through hard, usually consolidated formations. The cutter head is usually slightly larger than the flights.

The auger flights are turned by means of a rotary drive head mounted on a hydraulic feed system that pushes down or pulls back on the flight. The cuttings are brought to the surface by the flights, which act as a screw conveyor. As the hole is advanced, more auger flights are added until the hole reaches the desired depth.

To obtain split-spoon samples from solid stem auger borings. The augers must be completely withdrawn at each sampling depth.

Solid stem augers are usually used to advance a hole in stable formations. This method is not effective in unconsolidated material or below the water table because the borehole will collapse when the flights are removed. Solid stem augers are generally not used for the installation of monitoring wells, and the PM must be consulted if a solid stem auger must be used for well installation.

Hollow- Stem Auger Borings

A hollow-stem auger consists of a continuous flight auger surrounding a hollow drill stem. A central “plug”, or “butterfly” bit, at the end of a drill rod, is used to prevent soil from entering the hollow stem as the hole is advanced between samples. The hollow-stem auger is advanced in a manner similar to Solid Flight Auger; however, removal of the hollow-stem auger is not necessary for sampling. The “plug”, or “butterfly” bit, is removed, and samples are obtained through the hollow drill stem, which acts like a casing to hold the hole open. This increases the usage of hollow-stem augers in soft and loose soil. Usually, no drilling mud is required, which could otherwise interfere with accurate groundwater level readings. In addition, this method of drilling is extremely fast, cost-effective, and requires little to no water.

Below the water table, the removal of the center “plug” or “butterfly” bit can disturb the sand and affect the validity of the SPT. When this condition develops leading to questionable SPT results, you may add water

or drill mud to the inside of the stem to create a reverse head of water and prevent heaving. Water should also be added to the borehole while auguring clayey soils to help prevent the "baking" of the material due to the heat generated during the rapid advancement of the augers. This "baking" of clay soils can adversely affect the permeability of the subsurface material. Another disadvantage of this method is that refusal may prematurely be encountered in boulders or dense rocky soils. See ASTM D 6151 (AASHTO T 251).

The flights of a hollow stem auger are welded onto a larger diameter pipe which allows drill rods to pass through the centre of the flight. The flights are typically 1.5 m long. A centre plug, or pilot assembly, is inserted in the hollow centre to prevent soil from coming up into the auger during drilling. The centre plug can have a bit attached that helps to advance the auger.

The first auger flight is equipped with a bit of cutter or teeth for cutting through hard formations. The cutter teeth are usually significantly larger than the flights. The centre plug and drill rods can connect through the auger flights to the top-head drive in order to assure that the drill rods and plug rotate with the flights. If using a split-spoon sampler as a centre plug, the sampler must be removed and cleaned prior to sampling. Hollow stem auger flights are advanced in the same manner as solid stem augers. Hollow stem augers are available with OD diameters ranging from approximately 15 cm to 55cm.

Hollow stem augers are more versatile than solid stem augers because: they can act as a temporary casing to prevent caving and sloughing of the borehole wall; they allow soil samples to be obtained more easily and accurately; small diameter monitoring wells can be installed and sand/gravel packed without the use of casing or drilling fluids; they can be used to drill through unconsolidated formations and below the water table.

Wash Borings

In this method, the boring is advanced by a combination of the chopping action of a light "Fishtail" bit and the jetting action of water flowing through the bit. This method is used only when precise soil information is not required between sample intervals in loose, fine granular material. Generally, the casing is required to stabilize the walls of the borehole. Large quantities of water are required for this method of drilling. Generally, there are better, more efficient methods available to drill a borehole.

Mud Rotary Drilling

This method consists of using a rotary drill with rotating thick-walled, hollow drill rods usually attached to a tri-cone bit. Drilling mud is circulated from a mud tub and then through the drilling rods as the drill rod is advanced. The drilling mud lifts the drilling cuttings out of the borehole while maintaining hole stability. The drill cuttings are screened and separated from the drilling mud, which is then recirculated. To collect a sample, the drill rods and bits are pulled out of the hole and replaced with drill rods and the required sampling device. This method is fast and provides excellent sampling and in situ testing data due to minimal disturbance to the soils at the bottom of the borehole prior to sampling. It is effective in all soil types except for very gravelly material with cobbles and boulders. No information can be reliably obtained about

groundwater levels during the drilling operation, and the soil material between sampling intervals is difficult to observe from the drilling mud return.

Air Drilling

This type of drilling uses compressed air to remove cuttings from the borehole as the drill bit is advanced. Both rotary or percussion techniques can be utilized and either open hole (rotary reverse circulation) or under-reamed casing advancement (ODEX) can be used in the drilling process. SPT samples can be obtained; however, the materials between samples are highly disturbed. This type of drilling is generally fast, but expensive, and is most useful when drilling deep holes in dense gravels and boulders where traditional Hollow Stem Auger and Mud Rotary techniques cannot drill or sample.

Direct Push

Direct push is a drilling and sampling technique where the tools are driven into the ground. No rotation is involved so all the samples are uncontaminated and there is no drilling debris on the surface. The main application for this method is for drilling various soils, clays and sands both consolidated and unconsolidated. It allows the driller to take a core sample sealed inside a plastic tube so that no handling of the sample takes place. Clean disposal samples tubes must be used for every sample and never reused. Installation of monitoring wells in direct push drilling boreholes where casing is used is acceptable. This method does have limitation when drilling at depth and in hard/stiff formations. Generally, SPT is not completed using a direct push drilling rig and as such is generally not used for geotechnical investigations.

Drilling Techniques for Heaving /Flowing Sand

The drilling techniques used to advance the auger column within heaving sands may vary greatly from those techniques used when drilling in unsaturated materials. Problems may occur when a borehole is advanced to a desired depth without the use of drilling fluids for the purpose of either sampling the formation or installing a monitoring well. As the pilot assembly, or centre plug, is retracted, the hydrostatic pressure within the saturated sand forces water and loose sediments to rise inside the hollow centre of the auger column. These sediments can rise several metres inside the lower auger sections. The resulting “plug” of sediment inside the hollow auger column can interfere with the collection of formation samples, the installation of the monitoring well or even additional drilling.

The difficulties with heaving sands may be overcome by maintaining a positive pressure head within the auger column. A positive pressure head can be created by adding a sufficient amount of clean water or other drilling fluid inside the hollow stem. Clean ‘potable’ water (e.g., water that does not contain analytes of concern to a monitoring program) is usually preferred as the drilling fluid in order to minimize potential interference with samples collected from the completed well.

The head of clean water inside the auger column must exceed the hydrostatic pressure within the sand formation to limit the rise of loose sediments inside the hollow-stem. Where the saturated sand formation is unconfined, the water level inside the auger column is maintained above the elevation of the water table.

Where the saturated sand formation is confined, the water level inside the auger column is maintained above the potentiometric surface of the formation. If the potentiometric surface of the formation rises above the ground elevation, however, the heaving sand problem may be very difficult to counteract and may represent a limitation to the use of the drilling method.

1.4 Occupational Health and Safety

Prior to drilling, the Site is inspected to ensure that no potentially hazardous material is present near/around the drilling area. Safety procedures are reviewed and a safety check of the equipment is conducted including locating the emergency stop button on the drill rig, checking personal protective equipment (hard hats, safety shoes, eye/ear protection), locating the first aid kit and confirming the location of the nearest hospital, and verifying the standard procedure in case of injury.

1.5 Drilling Spoils

Excess soil generated during sampling and drilling procedure is stored at the Site in metal barrels. If the analytical results indicate the soil is contaminated, a licensed disposal company is notified to collect the barrels of soil for proper disposal

1.6 Borehole Abandonment

After drilling, logging and/or sampling, boreholes will be backfilled by the method described below:

- Bentonite is thoroughly mixed into the grout within the specified percentage range. The tremie grout is usually placed into the hole; however, for selected boreholes (e.g., shallow borings well above the water table) at certain sites, the grout may be allowed to free fall, taking care to ensure the grout does not bridge and form gaps or voids in the grout column.
- The volume of the borehole is calculated and compared to the grout volume used during grouting to aid in verifying that bridging did not occur.
- When using a tremie to place grout in the borehole, the bottom of the tremie is submerged into the grout column and withdrawn slowly as the hole fills with grout. If allowing the grout to free fall (and not using a tremie), the grout is poured slowly into the boring. The rise of the grout column is visually monitored or sounded with a weighted tape.
- If the method used to drill the boring utilized a drive casing, the casing is slowly extracted during grouting such that the bottom of the casing does not come above the top of the grout column.
- During the grouting process, no contaminating material (oil, grease, or fuels from gloves, pumps, hoses, et. al) is permitted to enter the grout mix and personnel wear personal protective equipment as specified in the Project Health and Safety Plan.

- Following grouting, barriers are placed over grouted boreholes as the grout is likely to settle in time, creating a physical hazard. Grouted boreholes typically require at least a second visit to 'top off' the hole.
- The surface hole condition should match the pre-drilling condition (asphalt, concrete, or smoothed flush with native surface), unless otherwise specified in the project work plans.

1.7 Subsurface Obstruction

Where refusal to drilling occurs due to rock, foundation or underground services, and the borehole is relocated within 2.0 m downstream from the original borehole location.

2. Soil Sampling

2.1 Introduction

Soil sampling is conducted in accordance with the "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario, May 1996" as revised December 1996 (MOE Guidance Manual) and as amended by O. Reg. 366/05, 66/08, 511/09, 245/10, 179/11, 269/11 and 333/13. The sampling procedures are described herein.

2.2 Drilling Rig Decontamination

- Geoprobe

One-time use Shelby tube (thin-walled) samples are recovered from the boreholes in clear disposable PVC liners to prevent cross-contamination.

- CME 55

Drilling equipment such as drill rigs, augers, drill pipes, drilling rods and split-spoons are decontaminated prior to initial use, between borehole locations and at the completion of drilling activities. The drilling equipment is manually scrubbed with a brush using a phosphate-free solution and thoroughly steam cleaned and/or power washed to remove any foreign material and potential contaminants. In addition, the spilt-spoon sampler and any sub-sampling equipment are decontaminated prior to each usage. Various solutions are used for sampling equipment decontamination as described below:

- Phosphate-free soap solution (i.e., Alconox), tap water and distilled water are used for suspected petroleum hydrocarbon soil sampling.
- A reagent-grade methanol solution and distilled water are used for suspected VOCs soil sampling. The reinstate waste is collected.
- Reagent-grade 10% nitric acid solution and distilled water are used for suspected metals soil sampling. The reinstate waste will be collected.

2.3 Sample Logging and Field Screening

Samples are typically collected at 1.5 m intervals in the overburden. Tactile examination of the samples is made to classify the soil, and a log is recorded for each borehole detailing the physical characteristics of the soil including colour, soil type, structure, and any observed staining or odour. The organic vapour readings, the moisture content of the samples as determined in the laboratory, the groundwater and cave-in levels measured at the time of investigation, and the groundwater monitoring well construction details are given on the borehole logs.

2.4 Field Screening and Calibration Procedures

The soil samples are classified based on physical characteristics including colour, soil type, moisture, and visible observation of staining and/or odour. In addition, the organic vapour reading for each soil sample is determined using a gas detector. Based on the overall soil physical characteristics, representative soil sample are selected for chemical analysis.

The organic vapour readings are measured using a portable RKI Eagle gas detector, TYPE 101 set to include all gases, and having a minimum detection of 2 ppm. Prior to Sampling and Analysis Plan measurement, the detector is calibrated using a Hexane 40% LEL gas. The allowable range of calibration is 38% to 42%.

2.5 Soil Sampling

The soil from the disposable sampler liner is handled using new disposable gloves in order to avoid the risk of cross-contamination between the samples. Sufficient amounts of the soil samples are placed into clean glass jars with Teflon lined lids for analyses of polychlorinated biphenyls, polyaromatic hydrocarbons, moisture content, medium to heavy PHCs, and metals and inorganics.

Small amounts of the soil samples are collected using a disposable ‘T’-shaped Terracore sampler and stored in methanol or sodium bisulfate vials for light PHCs (CCME F1) and VOCs analysis, respectively; the remainder of the samples is placed into a sealable bag for vapour measurement and soil classification. The samples are stored in an insulated container with ice after sampling and during shipment to the laboratory.

The minimum requirements for the number, type and frequency of field quality control are given below:

- Field Blanks: Field blank samples for VOCs analysis are prepared to confirm that no contamination takes place during the soil sampling procedure.
- Field Duplicates: At least 1 field duplicate sample is collected and submitted for laboratory analysis for every 10 soil samples that are collected to ensure the soil sampling technique is accurate.

3. Well Installation and Groundwater Sampling

3.1 Introduction

Well installations will be conducted by a licensed well driller, in accordance to O.Reg. 903. The well installation procedures are described herein.

3.2 Screen and Riser Pipe

Monitoring wells are constructed from individually wrapped 38 or 50 mm inside diameter (ID) schedule 40 polyvinyl chloride (PVC) flush threaded casing equipped with O-rings. The screen consists of casing material which is factory slotted (slot width = 0.25 mm) to permit the entry of water into the well. The bottom of the screens is equipped with threaded end caps. The appropriate number of risers is coupled with the screen section(s) via threaded joints to construct the well. The top of the wells are tightly capped using a locking well cap, which prevents the infiltration of surface water and foreign material into the well and also provides security. A watertight, traffic-rated protective casing is installed over each monitoring well within a concrete pad extending approximately 0.5 mbgs. No PVC cements or other solvent based cements are used in the construction of the monitoring wells.

3.3 Well Materials Decontamination

Dedicated sampling equipment, such as submersible pumps, are decontaminated prior to installation inside monitoring wells. Where factory-cleaned, hermetically sealed materials are used, no decontamination is conducted.

Setting Screen, Riser Casings and Filter Materials

At total depth, the soil cuttings are removed through circulation or rapidly spinning the augers prior to constructing the well. The drill pipe and bit or centre bit boring is removed. The well construction materials are then installed inside the open borehole or through the centre of the drive casing or augers.

After the monitoring well assembly is lowered to the bottom of the borehole, the filter pack is added until its height is approximately two feet above the top of the screen, and placement is verified. The filter pack is then surged using a surge block or swab in order to settle the pack material and reduce the possibility of bridging.

Setting Seals and Grouting

Once the top of the filter pack is verified to be in the correct position, a bentonite seal is placed above the filter pack. The seal is allowed to hydrate for at least one hour before proceeding with the grouting operation.

After hydration of the bentonite seal, grout is then pumped through a tremie pipe and filled from the top of the bentonite seal upward. The bottom of the tremie pipe should be maintained below the top of the grout to prevent free fall and bridging. When using drive casing or hollow-stem auger techniques, the drive casing/augers should be raised in incremental intervals, keeping the bottom of the drive casing/augers below the top of the grout. Grouting will cease when the grout level has risen to within approximately one to two feet of the ground surface, depending on the surface completion type (flush-mount versus above-ground). Grout levels are monitored to assure that grout taken into the formation is replaced by additional grout.

Capping the Wells

For above-ground completions, the protective steel casing will be centered on the well casing and inserted into the grouted annulus. Prior to installation, a 2-inch deep temporary spacer may be placed between the PVC well cap and the bottom of the protective casing cover to keep the protective casing from settling onto the well cap. A minimum of 24 hours after grouting should elapse before installation of the concrete pad and steel guard posts for aboveground completions, or street boxes or vaults for flush mount completions. For above-ground completions, a concrete pad, usually 3-foot by 3-foot by 4-inch thick, is constructed at ground surface around the protective steel casing. The concrete is sloped away from the protective casing to promote surface drainage from the well.

For flush-mount (or subgrade) completions, a street box or vault is set and cemented in position. The top of the street box or vault will be raised slightly above grade and the cement sloped to grade to promote surface drainage away from the well.

Documentation of Monitoring Well Configuration

The following information is recorded:

- Length of well screen
- Total depth of well boring
- Depth from ground surface to top of grout or bentonite plug in bottom of borehole (if present)
- Depth to base of well string
- Depth to top and bottom of well screen

APPENDIX C

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

SIRATI & PARTNERS

LOG OF BOREHOLE BH/MW 101

PROJECT: Geotechnical and Hydrogeological Investigations and Excess Soil
CLIENT: Eden Oak
PROJECT LOCATION: 159 Confederation Street, Town of Halton Hills
DATUM: Geodetic
BH LOCATION: N 4836409.843 E 585856.352

DRILLING DATA
Method: Solid Stem Auger
Diameter: 150 mm
Date: Jun-19-2024
Drilling Contractor: Elements

REF. NO.: SP23-01265-01
ENCL NO.: 2

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION
255.7							
0.0	**FILL:** gravelly sand, trace silt, brown, moist		1	SS			
254.9							
0.8	**GRAVELLY SAND:** trace silt, brown to light brown, moist		2	SS			
			3	SS			
			4	SS			
			5	SS			
251.9							
3.8	**SAND AND GRAVEL:** trace to some silt, brown, wet trace cobbles, trace clay		6	SS		W. L. 251.9 m Jul 04, 2024	
			7	SS			
			8	SS			
249.6							
6.1	**SILTY SAND TILL:** trace cobbles, trace gravel, brownish grey, moist		9	SS			
			10	SS			
248.0							
7.6	**SILT TILL:** trace to some sand, trace to some clay, trace gravel, reddish brown, wet		11	SS			
247.3							
8.4	**CLAYEY SILT TILL:** trace gravel, trace sand, reddish brown, wet		12	SS			
246.4			13	SS			
9.3	**END OF BOREHOLE:** 1. Borehole was open upon completion of drilling. 2. Groundwater level was encountered at 5.40 m below ground surface upon completion of drilling. 3. Nested monitoring well was installed (Deep well). 4. Monitoring well observations for long-term stabilized groundwater levels: Date — Depth (mbgs) July 04, 2024 — 3.80 m						

DYNAMIC CONE PENETRATION RESISTANCE PLOT (20 40 60 80 100)
SHEAR STRENGTH (kPa) (20 40 60 80 100)
○ UNCONFINED ● QUICK TRIAXIAL + FIELD VANE & Sensitivity × LAB VANE

PLASTIC LIMIT w_P — NATURAL MOISTURE CONTENT w — LIQUID LIMIT w_L
WATER CONTENT (%) (10 20 30)

POCKET PEN. (Cu) (kPa)
NATURAL UNIT WT (kN/m³)
CHEMICAL ANALYSIS AND GRAIN SIZE DISTRIBUTION (%)
GR SA SI CL

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: $+^3$, $\times^3$: Numbers refer to Sensitivity; ε_f=3% Strain at Failure

SPCL SOIL LOG SP23-01265-01.GPJ SPCL.GDT 24-7-17

SIRATI & PARTNERS

LOG OF BOREHOLE BH/MW 102

PROJECT: Geotechnical and Hydrogeological Investigations and Excess Soil
CLIENT: Eden Oak
PROJECT LOCATION: 159 Confederation Street, Town of Halton Hills
DATUM: Geodetic
BH LOCATION: N 4836379.126 E 585948.565

DRILLING DATA
Method: Solid Stem Auger
Diameter: 150 mm
Date: Jun-19-2024
Drilling Contractor: Elements

REF. NO.: SP23-01265-01
ENCL NO.: 3

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION
254.7							
254.6 / 0.1	**TOPSOIL:** 115 mm						
	SILTY SAND: trace to some gravel, brown, moist		1	SS			254
1	trace cobbles		2	SS			
253.2							
1.5	**SANDY SILT:** trace cobbles, trace gravel, brown, wet		3	SS			253
2							
252.1	wet		4	SS		W. L. 252.2 m Jul 04, 2024	
2.5	**SILTY SAND TILL:** trace gravel, reddish brown, moist						
3			5	SS			251
	trace clay		6	SS			
4	trace cobbles		7	SS			250
5							
	moist to very moist		8	SS			249
6 / 248.6							
6.1	**SILT:** trace sand, trace clay, grey, very moist to wet		9	SS			
247.8							248
6.9 / 247.5	**SILTY SAND TILL:** trace cobbles, trace gravel, brown, wet		10	SS			
7 / 7.2	**END OF BOREHOLE:**						

1. Borehole was open upon completion of drilling.
2. Groundwater level was encountered at 5.30 m below ground surface upon completion of drilling.
3. Nested monitoring well was installed (Deep well).
4. Monitoring well observations for long-term stabilized groundwater levels:

Date	Depth (mbgs)
July 04, 2024	2.50 m

DYNAMIC CONE PENETRATION RESISTANCE PLOT
20 40 60 80 100

SHEAR STRENGTH (kPa)
○ UNCONFINED + FIELD VANE & Sensitivity
● QUICK TRIAXIAL × LAB VANE
20 40 60 80 100

PLASTIC LIMIT w_P | NATURAL MOISTURE CONTENT w | LIQUID LIMIT w_L
WATER CONTENT (%)
10 20 30

POCKET PEN. (Cu) (kPa)

NATURAL UNIT WT (kN/m³)

CHEMICAL ANALYSIS AND GRAIN SIZE DISTRIBUTION (%)
GR SA SI CL

GROUNDWATER ELEVATIONS
Measurement 1st ▽ 2nd ▼ 3rd ▼ 4th ▼

GRAPH NOTES
+ 3, × 3: Numbers refer to Sensitivity
○ ε=3% Strain at Failure

SPCL SOIL LOG SP23-01265-01.GPJ SPCL.GDT 24-7-17

SIRATI & PARTNERS

LOG OF BOREHOLE BH/MW 103

PROJECT: Geotechnical and Hydrogeological Investigations and Excess Soil
CLIENT: Eden Oak
PROJECT LOCATION: 159 Confederation Street, Town of Halton Hills
DATUM: Geodetic
BH LOCATION: N 4836186.842 E 586090.836

DRILLING DATA
Method: Solid Stem Auger
Diameter: 150 mm
Date: Jun-20-2024
Drilling Contractor: Elements

REF. NO.: SP23-01265-01
ENCL NO.: 4

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION
252.0							
252.0 / 0.1	**TOPSOIL:** 130 mm						
	SILTY SAND: trace cobbles, trace gravel, brown, moist		1	SS			
1			2	SS			251
			3	SS			
2 / 249.7							250
2.3	**SILT TILL:** trace gravel, trace sand, trace clay, brown, very moist		4	SS			
3			5	SS			249
4	greyish brown, trace oxidation, sand seams (coarse sand and gravel)		6	SS			248
247.4							
4.6	**SILTY SAND TILL:** trace to some gravel, trace cobbles, trace clay, brown, very moist to wet		7	SS			
5	reddish brown, very moist		8	SS			247
6 / 245.9							246
6.1	**SILTY SAND:** trace gravel, reddish brown, wet		9	SS			
7	grey, very moist		10	SS			245
	very moist to wet		11	SS			
8 / 243.8							244
8.2	**END OF BOREHOLE:**						

W. L. 247.5 m
Jul 04, 2024

1. Borehole was open upon completion of drilling.
2. Groundwater level was encountered at 7.6 m below ground surface upon completion of drilling.
3. Nested monitoring well was installed (Deep well).
4. Monitoring well observations for long-term stabilized groundwater levels:

Date	Depth (mbgs)
July 04, 2024	4.50 m

SAMPLES

DYNAMIC CONE PENETRATION RESISTANCE PLOT
20 40 60 80 100

SHEAR STRENGTH (kPa)
○ UNCONFINED + FIELD VANE & Sensitivity
● QUICK TRIAXIAL × LAB VANE
20 40 60 80 100

PLASTIC LIMIT w_P | NATURAL MOISTURE CONTENT w | LIQUID LIMIT w_L
WATER CONTENT (%)
10 20 30

POCKET PEN. (Cu) (kPa)

NATURAL UNIT WT (kN/m³)

CHEMICAL ANALYSIS AND GRAIN SIZE DISTRIBUTION (%)
GR SA SI CL

GROUNDWATER ELEVATIONS
Measurement 1st ▽ 2nd ▼ 3rd ▼ 4th ▼

GRAPH NOTES
+ 3, × 3: Numbers refer to Sensitivity
○ 8=3% Strain at Failure

SIRATI & PARTNERS

LOG OF BOREHOLE BH/MW 104

PROJECT: Geotechnical and Hydrogeological Investigations and Excess Soil
CLIENT: Eden Oak
PROJECT LOCATION: 159 Confederation Street, Town of Halton Hills
DATUM: Geodetic
BH LOCATION: N 4836218.476 E 586064.173

DRILLING DATA
Method: Solid Stem Auger
Diameter: 150 mm
Date: Jun-20-2024
Drilling Contractor: Elements

REF. NO.: SP23-01265-01
ENCL NO.: 5

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	SAMPLES NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION
252.8							
252.7	**TOPSOIL:** 100 mm						
0.1	**FILL:** silty sand, trace cobbles, trace gravel, brown, moist, trace rootlets		1	SS			252
			2	SS			
251.3							
1.5	**SILTY SAND:** trace to some cobbles, trace to some gravel, brown, moist to very moist		3	SS			251
250.5							
2.3	**SILT TILL:** trace to some sand, trace gravel, grey, moist		4	SS			250
			5	SS		W. L. 249.7 m Jul 04, 2024	
249.0							
3.8	**CLAYEY SILT:** trace sand, grey, very moist		6	SS			249
248.3							
4.6	**SILTY SAND TILL:** trace gravel, greyish brown, very moist		7	SS			248
247.5							
5.3	**SILTY SAND:** trace gravel, brown, wet		8	SS			247
	reddish brown		9	SS			
			10	SS			246
245.4							
7.5	**END OF BOREHOLE:**						

1. Borehole was open upon completion of drilling.
2. Groundwater level was encountered at 3.8 m below ground surface upon completion of drilling.
3. Nested monitoring well was installed (Deep well).
4. Monitoring well observations for long-term stabilized groundwater levels:

Date	Depth (mbgs)
July 04, 2024	3.10 m

DYNAMIC CONE PENETRATION RESISTANCE PLOT
20 40 60 80 100

SHEAR STRENGTH (kPa)
○ UNCONFINED + FIELD VANE & Sensitivity
● QUICK TRIAXIAL × LAB VANE
20 40 60 80 100

PLASTIC LIMIT w_P | NATURAL MOISTURE CONTENT w | LIQUID LIMIT w_L
WATER CONTENT (%)
10 20 30

POCKET PEN. (Cu) (kPa)

NATURAL UNIT WT (kN/m³)

CHEMICAL ANALYSIS AND GRAIN SIZE DISTRIBUTION (%)
GR SA SI CL

SPCL SOIL LOG SP23-01265-01.GPJ SPCL.GDT 24-7-17

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES
$+^3$, $\times^3$: Numbers refer to Sensitivity
○ ε_f=3% Strain at Failure

SIRATI & PARTNERS

LOG OF BOREHOLE BH/MW 01

PROJECT: Geotechnical and Hydrogeological Investigations and Excess Soil
CLIENT: Eden Oak
PROJECT LOCATION: 159 Confederation Street, Town of Halton Hills
DATUM: Geodetic
BH LOCATION: N 4836219 E 586124

DRILLING DATA
Method: Solid Stem Auger
Diameter: 150 mm
Date: Dec-01-2023

REF. NO.: SP23-01265-00
ENCL NO.: 2

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH (kPa) ○ UNCONFINED ● QUICK TRIAXIAL + FIELD VANE & Sensitivity × LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
254.2												
254.0 0.2	**TOPSOIL:** 150 mm thick											
	FILL: silty sand, trace cobbles, trace gravel, trace organics, brown, very moist, loose		1	SS	4		254					
253.5 0.8	**SAND AND GRAVEL:** some silt, trace cobbles, trace clay, brown, moist, compact		2	SS	25							39 39 18 4
1			3	SS	23		253					
2	dense		4	SS	34		252					
3			5	SS	30		251					
4							250					
249.6 4.6	**SANDY SILT:** trace to some clay, trace gravel, brown, moist, very dense		6	SS	50/ 150mm							
5							249					
6												
247.8 6.4	grey, very moist		7	SS	50/ 150mm	W. L. 248.1 m Dec 12, 2023						
	END OF BOREHOLE:											

1. Borehole was open and dry upon completion of drilling.
2. Nested monitoring well was installed (Deep well).
3. Monitoring well observations for long-term stabilized groundwater levels:

Date	Depth (mbgs)
Dec 12, 2023	6.07m

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: $+^3$, $\times^3$: Numbers refer to Sensitivity; ○ ε_f=3% Strain at Failure

SPCL SOIL LOG /DRAFT SP23-01265-00.GPJ SPCL.GDT 23-12-13

SIRATI & PARTNERS

LOG OF BOREHOLE BH/MW 02

PROJECT: Geotechnical and Hydrogeological Investigations and Excess Soil
CLIENT: Eden Oak
PROJECT LOCATION: 159 Confederation Street, Town of Halton Hills
DATUM: Geodetic
BH LOCATION: N 4836417 E 585897

DRILLING DATA
Method: Solid Stem Auger
Diameter: 150 mm
Date: Dec-04-2023

REF. NO.: SP23-01265-00
ENCL NO.: 3

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m	GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH (kPa) ○ UNCONFINED ● QUICK TRIAXIAL + FIELD VANE & Sensitivity × LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
257.0												
0.0 / 256.2	**POSSIBLE FILL:** gravelly sand, trace silt, trace rootlets, brown, moist, loose		1	SS	9				○			
0.8 / 254.7	**SAND AND GRAVEL:** trace to some silt, trace cobbles, trace clay, brown, moist, dense		2	SS	31		256		○			
	very dense		3	SS	50/ 100mm		255		○			
2.3 / 252.4	**SILTY SAND TILL:** trace cobbles, trace gravel, brown, moist, very dense		4	SS	50/ 140mm		254		○			
			5	SS	50/ 50mm		253		○			
4.6	**SAND AND SILT TILL:**trace cobbles, trace gravel, trace clay, brown, moist, very dense		6	SS	50/ 130mm	W. L. 252.6 m Dec 12, 2023	252		○			3 41 50 6
			7	SS	50/ 140mm		251		○			
			8	SS	50/ 100mm		250		○			
							249					
	very moist		9	SS	50/ 140mm		248		○			
247.1			10	SS	50/ 150mm				○			9 41 46 4
9.9	**END OF BOREHOLE:**											

1. Borehole was open upon completion of drilling.
2. Groundwater was encountered at 9.1 mbgs upon completion of drilling.
3. Nested monitoring well was installed (Deep well).
4. Monitoring well observations for long-term stabilized groundwater levels:

Date	Depth (mbgs)
Dec 12, 2023	4.43m

GROUNDWATER ELEVATIONS
Measurement 1st ▽ 2nd ▼ 3rd ▼ 4th ▼

GRAPH NOTES: $+^3$, $\times^3$: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

SPCL SOIL LOG /DRAFT SP23-01265-00.GPJ SPCL.GDT 23-12-13

SIRATI & PARTNERS

LOG OF BOREHOLE BH/MW 03

PROJECT: Geotechnical and Hydrogeological Investigations and Excess Soil
CLIENT: Eden Oak
PROJECT LOCATION: 159 Confederation Street, Town of Halton Hills
DATUM: Geodetic
BH LOCATION: N 4836294 E 585981

DRILLING DATA
Method: Solid Stem Auger
Diameter: 150 mm
Date: Dec-04-2023

REF. NO.: SP23-01265-00
ENCL NO.: 4

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH (kPa) ○ UNCONFINED ● QUICK TRIAXIAL + FIELD VANE & Sensitivity × LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L / WATER CONTENT (%) (10 20 30)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
253.3												
0.0 / 252.6	**POSSIBLE FILL:** gravelly sand, trace silt, trace rootlets, trace wood fragments, brown, moist, loose		1	SS	7		253					
0.8 / 251.0	**SAND AND GRAVEL:** trace to some silt, trace cobbles, trace clay, brown, moist, dense		2	SS	40							
			3	SS	46		252					
2.3 / 250.3	**SILTY SAND TILL:** trace cobbles, trace gravel, trace clay, brown, moist, dense		4	SS	31	▽ W. L. 250.9 m Dec 12, 2023	251					8 59 30 3
3.1	**SAND AND SILT TILL:** trace gravel, trace clay, reddish brown, very moist, compact		5	SS	18		250					
	very dense		6	SS	50/ 100mm		249					
247.1							248					
6.2	**END OF BOREHOLE:**		7	SS	50/ 140mm							

1. Borehole was open upon completion of drilling.
2. Groundwater was encountered at 3.0 mbgs upon completion of drilling.
3. Nested monitoring well was installed (Deep well).
4. Monitoring well observations for long-term stabilized groundwater levels:

Date	Depth (mbgs)
Dec 12, 2023	2.44m

GROUNDWATER ELEVATIONS
Measurement 1st ▽ 2nd ▼ 3rd ▼ 4th ▼

GRAPH NOTES: $+^3$, $\times^3$: Numbers refer to Sensitivity; $\circ^{\varepsilon=3\%}$ Strain at Failure

SPCL SOIL LOG /DRAFT SP23-01265-00.GPJ SPCL.GDT 23-12-13

SIRATI & PARTNERS

LOG OF BOREHOLE BH/MW 04

PROJECT: Geotechnical and Hydrogeological Investigations and Excess Soil
CLIENT: Eden Oak
PROJECT LOCATION: 159 Confederation Street, Town of Halton Hills
DATUM: Geodetic
BH LOCATION: N 4836331 E 586190

DRILLING DATA
Method: Solid Stem Auger
Diameter: 150 mm
Date: Dec-01-2023

REF. NO.: SP23-01265-00
ENCL NO.: 5

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS "N" 0.3 m	GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH (kPa) ○ UNCONFINED ● QUICK TRIAXIAL + FIELD VANE & Sensitivity × LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
249.1												
249.0	**TOPSOIL:** 200mm											
0.2	**POSSIBLE FILL:** silty sand, trace cobbles, trace gravel, trace organics, brown, very moist, loose		1	SS	6							
248.0			2	SS	23		248					
1.0	**SANDY SILT:** trace to some clay, trace gravel, brown, very moist, compact		3	SS	15							
	dense		4	SS	38		247					
	oxidated		5	SS	36		246					Non-plastic 7 33 52 8
244.5							245					
4.6	**SAND:** trace to some silt, trace gravel, brown, moist, dense		6	SS	37		244					
	very dense		7	SS	50/ 130mm		243					
			8	SS	85		242					
239.9							241					
9.1	**SANDY SILT:** trace to some clay, trace gravel, brown, very moist, very dense		9	SS	50/ 150mm		240					
238.3							239					
10.8	reddish brown **END OF BOREHOLE:**		10	SS	50/ 100mm							

W. L. 240.7 m
Dec 12, 2023

1. Borehole was open upon completion of drilling.
2. Nested monitoring well was installed (Deep well).
3. Monitoring well observations for long-term stabilized groundwater levels:

Date	Depth (mbgs)
Dec 12, 2023	8.32m

GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES: $+^3$, $\times^3$: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

SPCL SOIL LOG /DRAFT SP23-01265-00.GPJ SPCL.GDT 23-12-13

APPENDIX D

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

AGAT Laboratories

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

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD
160 KONRAD CRESCENT UNIT 4
MARKHAM, ON L3R 9T9
(905) 833-1582

ATTENTION TO: Fuzail Patel

PROJECT: SP23-01265-01

AGAT WORK ORDER: 24T168041

SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jul 09, 2024

PAGES (INCLUDING COVER): 24

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

AGAT Laboratories

5835 COOPERS AVENUE
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TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

SAMPLE DESCRIPTION:				BH/MW-101 SS3	BH/MW-102 SS5	BH/MW-103 SS4	BH/MW-104 SS4	BH-105 SS1	BH-106 SS2	BH-107 SS1	BH-108 SS2
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-06-19 12:00	2024-06-19 12:00	2024-06-20 12:00	2024-06-20 12:00	2024-06-21	2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL	5968690	5968693	5968694	5968695	5968696	5968697	5968698	5968699
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	4	2	5	4	5	5	3	4
Barium	µg/g	220	2.0	55.5	48.3	58.1	78.2	60.2	122	102	63.2
Beryllium	µg/g	2.5	0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.6	<0.5	0.6
Boron	µg/g	36	5	7	6	7	7	8	19	<5	5
Boron (Hot Water Soluble)	µg/g	1.5	0.10	<0.10	<0.10	<0.10	<0.10	0.42	<0.10	0.14	<0.10
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	10	8	16	15	17	17	13	16
Cobalt	µg/g	22	0.8	4.5	3.8	8.0	6.8	8.0	9.2	5.8	7.2
Copper	µg/g	92	1.0	28.7	12.1	28.8	25.4	28.8	40.1	13.0	15.8
Lead	µg/g	120	1	7	4	7	6	12	10	9	11
Molybdenum	µg/g	2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	82	1	11	7	18	14	17	18	10	13
Selenium	µg/g	1.5	0.8	0.9	<0.8	<0.8	<0.8	<0.8	1.1	<0.8	1.1
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.54	<0.50	<0.50
Vanadium	µg/g	86	2.0	15.7	16.0	26.0	22.9	28.3	25.1	26.1	30.4
Zinc	µg/g	290	5	31	24	43	36	53	51	50	36
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2	<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	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.086	0.077	0.119	0.095	0.150	0.100	0.091	0.060
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	1.76	0.595	0.522	0.350	0.177	0.189	0.184	0.192
pH, 2:1 CaCl2 Extraction	pH Units		NA	6.50	6.51	6.64	6.73	6.67	6.59	6.31	6.26

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

		SAMPLE DESCRIPTION:		BH-109 SS1	BH-110 SS2	Dup-1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL	5968700	5968701	5968702
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	2	6	4
Barium	µg/g	220	2.0	54.5	68.6	57.9
Beryllium	µg/g	2.5	0.5	<0.5	<0.5	<0.5
Boron	µg/g	36	5	<5	6	<5
Boron (Hot Water Soluble)	µg/g	1.5	0.10	<0.10	0.16	<0.10
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	14	15	16
Cobalt	µg/g	22	0.8	5.5	5.9	7.1
Copper	µg/g	92	1.0	8.6	20.4	14.8
Lead	µg/g	120	1	7	10	10
Molybdenum	µg/g	2	0.5	<0.5	<0.5	<0.5
Nickel	µg/g	82	1	11	13	13
Selenium	µg/g	1.5	0.8	<0.8	0.9	0.8
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	<0.50	<0.50	<0.50
Vanadium	µg/g	86	2.0	25.4	25.3	30.6
Zinc	µg/g	290	5	36	51	35
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.046	0.109	0.053
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.169	0.147	0.152
pH, 2:1 CaCl2 Extraction	pH Units		NA	6.13	6.33	6.62

Certified By:

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - 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.

5968690-5968702 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
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TEL (905)712-5100
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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

SAMPLE DESCRIPTION:				BH/MW-101 SS3	BH/MW-102 SS5	BH/MW-103 SS4	BH/MW-104 SS4	BH-105 SS1	BH-106 SS2	BH-107 SS1	BH-108 SS2
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-06-19 12:00	2024-06-19 12:00	2024-06-20 12:00	2024-06-20 12:00	2024-06-21	2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL	5968690	5968693	5968694	5968695	5968696	5968697	5968698	5968699
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.19	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.22	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	0.13	<0.05	<0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.23	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	0.59	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	2.5	10.2	13.6	11.9	17.5	8.0	13.1	9.2
Surrogate	Unit	Acceptable Limits									
Naphthalene-d8	%	50-140		80	80	75	85	70	85	85	85
Acridine-d9	%	50-140		90	95	85	95	90	95	90	105
Terphenyl-d14	%	50-140		100	70	70	85	100	95	70	70

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Certificate of Analysis

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

		SAMPLE DESCRIPTION:		BH-109 SS1	BH-110 SS2	Dup-1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL	5968700	5968701	5968702
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.19	0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.22	0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	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
Dibenz(a,h)anthracene	µg/g	0.1	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
2-and 1-methyl Naphthalene	µg/g	0.59	0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	46.3	18.6	13.1
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140		75	70	80
Acridine-d9	%	50-140		95	105	105
Terphenyl-d14	%	50-140		95	95	80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - 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.

5968690-5968702 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 *)

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AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

				SAMPLE DESCRIPTION:	BH/MW-101 SS3	BH/MW-102 SS5	BH/MW-103 SS4	BH/MW-104 SS4	BH-105 SS1	BH-106 SS2	BH-107 SS1	BH-108 SS2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2024-06-19 12:00	2024-06-19 12:00	2024-06-20 12:00	2024-06-20 12:00	2024-06-21	2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL		5968690	5968693	5968694	5968695	5968696	5968697	5968698	5968699
Polychlorinated Biphenyls	µg/g	0.3	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Moisture Content	%		0.1		2.5	10.2	13.6	11.9	17.5	8.0	13.1	9.2
Surrogate	Unit	Acceptable Limits										
Decachlorobiphenyl	%	50-140			104	100	100	80	84	88	116	112

				SAMPLE DESCRIPTION:	BH-109 SS1	BH-110 SS2	Dup-1
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL		5968700	5968701	5968702
Polychlorinated Biphenyls	µg/g	0.3	0.1		<0.1	<0.1	<0.1
Moisture Content	%		0.1		46.3	18.6	13.1
Surrogate	Unit	Acceptable Limits					
Decachlorobiphenyl	%	50-140			104	112	116

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - 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.

5968690-5968702 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: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

SAMPLE DESCRIPTION:				BH/MW-101 SS3	BH/MW-102 SS5	BH/MW-103 SS4	BH/MW-104 SS4	BH-105 SS1	BH-106 SS2	BH-107 SS1	BH-108 SS2
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-06-19 12:00	2024-06-19 12:00	2024-06-20 12:00	2024-06-20 12:00	2024-06-21	2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL	5968690	5968693	5968694	5968695	5968696	5968697	5968698	5968699
F1 (C6 to C10)	µg/g		5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	2.5	10.2	13.6	11.9	17.5	8.0	13.1	9.2
Surrogate	Unit	Acceptable Limits									
Toluene-d8	%	50-140		76	93	74	76	72	75	80	74
Terphenyl	%	60-140		86	98	95	97	85	98	71	100

SAMPLE DESCRIPTION:				BH-109 SS1	BH-110 SS2	Dup-1
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL	5968700	5968701	5968702
F1 (C6 to C10)	µg/g		5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA
Moisture Content	%		0.1	46.3	18.6	13.1
Surrogate	Unit	Acceptable Limits				
Toluene-d8	%	50-140		71	72	75
Terphenyl	%	60-140		74	74	87

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Certificate of Analysis

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - 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.

5968690-5968702 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.

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AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

SAMPLE DESCRIPTION:				BH/MW-101 SS3	BH/MW-102 SS5	BH/MW-103 SS4	BH/MW-104 SS4	BH-105 SS1	BH-106 SS2	BH-107 SS1	BH-108 SS2
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-06-19 12:00	2024-06-19 12:00	2024-06-20 12:00	2024-06-20 12:00	2024-06-21	2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL	5968690	5968693	5968694	5968695	5968696	5968697	5968698	5968699
Dichlorodifluoromethane	µg/g	0.05	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	<0.02
Bromomethane	ug/g	0.05	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	<0.05
Acetone	ug/g	0.5	0.50	<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	<0.05
Methylene Chloride	ug/g	0.05	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	<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	<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	<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	<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	<0.02
Chloroform	ug/g	0.05	0.04	<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	<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	<0.05
Carbon Tetrachloride	ug/g	0.05	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	<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	<0.03
Trichloroethylene	ug/g	0.05	0.03	<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	<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	<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	<0.04
Toluene	ug/g	0.2	0.05	<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	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<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	<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	<0.04
Chlorobenzene	ug/g	0.05	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	<0.05

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Certificate of Analysis

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

SAMPLE DESCRIPTION:				BH/MW-101 SS3	BH/MW-102 SS5	BH/MW-103 SS4	BH/MW-104 SS4	BH-105 SS1	BH-106 SS2	BH-107 SS1	BH-108 SS2
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-06-19 12:00	2024-06-19 12:00	2024-06-20 12:00	2024-06-20 12:00	2024-06-21	2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL	5968690	5968693	5968694	5968695	5968696	5968697	5968698	5968699
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<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	<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	<0.05
o-Xylene	ug/g		0.05	<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	<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	<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	<0.05
Xylenes (Total)	ug/g	0.05	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	<0.05
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	2.5	10.2	13.6	11.9	17.5	8.0	13.1	9.2
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		76	93	74	76	72	75	80	74
4-Bromofluorobenzene	% Recovery	50-140		83	80	68	63	67	72	81	83

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Certificate of Analysis

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

		SAMPLE DESCRIPTION:		BH-109 SS1	BH-110 SS2	Dup-1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL	5968700	5968701	5968702
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	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
Methyl tert-butyl Ether	ug/g	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
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Benzene	ug/g	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
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	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
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	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
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05

Certified By: NPopnikolof

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Certificate of Analysis

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-06-28

DATE REPORTED: 2024-07-09

		SAMPLE DESCRIPTION:		BH-109 SS1	BH-110 SS2	Dup-1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2024-06-21	2024-06-21	2024-06-21
Parameter	Unit	G / S	RDL	5968700	5968701	5968702
Bromoform	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Styrene	ug/g	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
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	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
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	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
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	46.3	18.6	13.1
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		71	72	75
4-Bromofluorobenzene	% Recovery	50-140		77	85	79

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - 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.

5968690-5968702 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

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Quality Assurance

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AGAT WORK ORDER: 24T168041
PROJECT: SP23-01265-01
ATTENTION TO: Fuzail Patel
SAMPLING SITE:159 Confederation Street
SAMPLED BY:Fuzail

Soil Analysis

RPT Date: Jul 09, 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	5968690	5968690	<0.8	<0.8	NA	< 0.8	111%	70%	130%	84%	80%	120%	89%	70%	130%
Arsenic	5968690	5968690	4	3	NA	< 1	117%	70%	130%	102%	80%	120%	100%	70%	130%
Barium	5968690	5968690	55.5	55.9	0.7%	< 2.0	112%	70%	130%	95%	80%	120%	120%	70%	130%
Beryllium	5968690	5968690	<0.5	<0.5	NA	< 0.5	105%	70%	130%	100%	80%	120%	125%	70%	130%
Boron	5968690	5968690	7	7	NA	< 5	82%	70%	130%	91%	80%	120%	95%	70%	130%
Boron (Hot Water Soluble)	5968690	5968690	<0.10	<0.10	NA	< 0.10	91%	60%	140%	103%	70%	130%	110%	60%	140%
Cadmium	5968690	5968690	<0.5	<0.5	NA	< 0.5	114%	70%	130%	108%	80%	120%	112%	70%	130%
Chromium	5968690	5968690	10	9	NA	< 5	113%	70%	130%	113%	80%	120%	109%	70%	130%
Cobalt	5968690	5968690	4.5	4.5	0.0%	< 0.8	108%	70%	130%	109%	80%	120%	104%	70%	130%
Copper	5968690	5968690	28.7	28.9	0.7%	< 1.0	99%	70%	130%	113%	80%	120%	NA	70%	130%
Lead	5968690	5968690	7	7	0.0%	< 1	95%	70%	130%	86%	80%	120%	97%	70%	130%
Molybdenum	5968690	5968690	<0.5	<0.5	NA	< 0.5	138%	70%	130%	110%	80%	120%	107%	70%	130%
Nickel	5968690	5968690	11	11	0.0%	< 1	110%	70%	130%	113%	80%	120%	103%	70%	130%
Selenium	5968690	5968690	0.9	<0.8	NA	< 0.8	92%	70%	130%	86%	80%	120%	104%	70%	130%
Silver	5968690	5968690	<0.5	<0.5	NA	< 0.5	114%	70%	130%	109%	80%	120%	110%	70%	130%
Thallium	5968690	5968690	<0.5	<0.5	NA	< 0.5	95%	70%	130%	85%	80%	120%	98%	70%	130%
Uranium	5968690	5968690	<0.50	<0.50	NA	< 0.50	96%	70%	130%	85%	80%	120%	104%	70%	130%
Vanadium	5968690	5968690	15.7	16.1	2.5%	< 2.0	116%	70%	130%	111%	80%	120%	110%	70%	130%
Zinc	5968690	5968690	31	31	0.0%	< 5	109%	70%	130%	110%	80%	120%	103%	70%	130%
Chromium, Hexavalent	5968700	5968700	<0.2	<0.2	NA	< 0.2	102%	70%	130%	88%	80%	120%	96%	70%	130%
Cyanide, WAD	5968913		<0.040	<0.040	NA	< 0.040	99%	70%	130%	108%	80%	120%	108%	70%	130%
Mercury	5968690	5968690	<0.10	<0.10	NA	0.10	120%	70%	130%	105%	80%	120%	103%	70%	130%
Electrical Conductivity (2:1)	5968690	5968690	0.086	0.090	4.5%	< 0.005	101%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	5968690	5968690	1.76	1.74	1.1%	NA									
pH, 2:1 CaCl2 Extraction	5973403		6.25	6.23	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.
More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.
Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

O. Reg. 153(511) - Metals & Inorganics (Soil)									
pH, 2:1 CaCl2 Extraction	5968702	5968702	6.62	6.50	1.8%	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.

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Quality Assurance

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

ATTENTION TO: Fuzail Patel

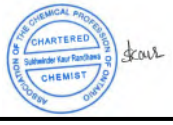
SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

Soil Analysis (Continued)

RPT Date: Jul 09, 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

Certified By:



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Trace Organics Analysis

RPT Date: Jul 09, 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) (Soil)															
F1 (C6 to C10)	5968702	5968702	<5	<5	NA	< 5	130%	60%	140%	126%	60%	140%	86%	60%	140%
F2 (C10 to C16)	5976617		< 10	< 10	NA	< 10	106%	60%	140%	124%	60%	140%	120%	60%	140%
F3 (C16 to C34)	5976617		< 50	< 50	NA	< 50	120%	60%	140%	126%	60%	140%	129%	60%	140%
F4 (C34 to C50)	5976617		< 50	< 50	NA	< 50	85%	60%	140%	85%	60%	140%	108%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5968702	5968702	<0.05	<0.05	NA	< 0.05	90%	50%	140%	99%	50%	140%	81%	50%	140%
Vinyl Chloride	5968702	5968702	<0.02	<0.02	NA	< 0.02	96%	50%	140%	118%	50%	140%	127%	50%	140%
Bromomethane	5968702	5968702	<0.05	<0.05	NA	< 0.05	107%	50%	140%	119%	50%	140%	125%	50%	140%
Trichlorofluoromethane	5968702	5968702	<0.05	<0.05	NA	< 0.05	101%	50%	140%	116%	50%	140%	126%	50%	140%
Acetone	5968702	5968702	<0.50	<0.50	NA	< 0.50	109%	50%	140%	93%	50%	140%	86%	50%	140%
1,1-Dichloroethylene	5968571	5968702	< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	90%	60%	130%	91%	50%	140%
Methylene Chloride	5968702	5968702	<0.05	<0.05	NA	< 0.05	97%	50%	140%	109%	60%	130%	89%	50%	140%
Trans- 1,2-Dichloroethylene	5968702	5968702	<0.05	<0.05	NA	< 0.05	95%	50%	140%	97%	60%	130%	103%	50%	140%
Methyl tert-butyl Ether	5968702	5968702	<0.05	<0.05	NA	< 0.05	84%	50%	140%	97%	60%	130%	70%	50%	140%
1,1-Dichloroethane	5968702	5968702	<0.02	<0.02	NA	< 0.02	113%	50%	140%	106%	60%	130%	99%	50%	140%
Methyl Ethyl Ketone	5968702	5968702	<0.50	<0.50	NA	< 0.50	115%	50%	140%	90%	50%	140%	92%	50%	140%
Cis- 1,2-Dichloroethylene	5968702	5968702	<0.02	<0.02	NA	< 0.02	91%	50%	140%	92%	60%	130%	97%	50%	140%
Chloroform	5968702	5968702	<0.04	<0.04	NA	< 0.04	98%	50%	140%	103%	60%	130%	108%	50%	140%
1,2-Dichloroethane	5968702	5968702	<0.03	<0.03	NA	< 0.03	106%	50%	140%	109%	60%	130%	99%	50%	140%
1,1,1-Trichloroethane	5968702	5968702	<0.05	<0.05	NA	< 0.05	62%	50%	140%	63%	60%	130%	65%	50%	140%
Carbon Tetrachloride	5968702	5968702	<0.05	<0.05	NA	< 0.05	62%	50%	140%	60%	60%	130%	60%	50%	140%
Benzene	5968702	5968702	<0.02	<0.02	NA	< 0.02	96%	50%	140%	95%	60%	130%	103%	50%	140%
1,2-Dichloropropane	5968702	5968702	<0.03	<0.03	NA	< 0.03	94%	50%	140%	91%	60%	130%	105%	50%	140%
Trichloroethylene	5968702	5968702	<0.03	<0.03	NA	< 0.03	69%	50%	140%	68%	60%	130%	91%	50%	140%
Bromodichloromethane	5968702	5968702	<0.05	<0.05	NA	< 0.05	65%	50%	140%	66%	60%	130%	66%	50%	140%
Methyl Isobutyl Ketone	5968702	5968702	<0.50	<0.50	NA	< 0.50	106%	50%	140%	114%	50%	140%	117%	50%	140%
1,1,2-Trichloroethane	5968702	5968702	<0.04	<0.04	NA	< 0.04	103%	50%	140%	105%	60%	130%	110%	50%	140%
Toluene	5968702	5968702	<0.05	<0.05	NA	< 0.05	108%	50%	140%	103%	60%	130%	96%	50%	140%
Dibromochloromethane	5968702	5968702	<0.05	<0.05	NA	< 0.05	62%	50%	140%	65%	60%	130%	74%	50%	140%
Ethylene Dibromide	5968702	5968702	<0.04	<0.04	NA	< 0.04	78%	50%	140%	80%	60%	130%	84%	50%	140%
Tetrachloroethylene	5968571	5968702	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	90%	60%	130%	91%	50%	140%
1,1,1,2-Tetrachloroethane	5968702	5968702	<0.04	<0.04	NA	< 0.04	65%	50%	140%	68%	60%	130%	64%	50%	140%
Chlorobenzene	5968702	5968702	<0.05	<0.05	NA	< 0.05	92%	50%	140%	90%	60%	130%	105%	50%	140%
Ethylbenzene	5968702	5968702	<0.05	<0.05	NA	< 0.05	98%	50%	140%	94%	60%	130%	108%	50%	140%
m & p-Xylene	5968702	5968702	<0.05	<0.05	NA	< 0.05	105%	50%	140%	102%	60%	130%	119%	50%	140%
Bromoform	5968702	5968702	<0.05	<0.05	NA	< 0.05	92%	50%	140%	65%	60%	130%	75%	50%	140%
Styrene	5968702	5968702	<0.05	<0.05	NA	< 0.05	76%	50%	140%	74%	60%	130%	87%	50%	140%
1,1,2,2-Tetrachloroethane	5968702	5968702	<0.05	<0.05	NA	< 0.05	106%	50%	140%	101%	60%	130%	76%	50%	140%
o-Xylene	5968702	5968702	<0.05	<0.05	NA	< 0.05	104%	50%	140%	101%	60%	130%	110%	50%	140%

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Trace Organics Analysis (Continued)

RPT Date: Jul 09, 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	5968702	5968702	<0.05	<0.05	NA	< 0.05	85%	50%	140%	81%	60%	130%	99%	50%	140%
1,4-Dichlorobenzene	5968702	5968702	<0.05	<0.05	NA	< 0.05	90%	50%	140%	80%	60%	130%	93%	50%	140%
1,2-Dichlorobenzene	5968702	5968702	<0.05	<0.05	NA	< 0.05	78%	50%	140%	74%	60%	130%	84%	50%	140%
n-Hexane	5968702	5968702	<0.05	<0.05	NA	< 0.05	81%	50%	140%	72%	60%	130%	92%	50%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5969135		<0.05	<0.05	NA	< 0.05	120%	50%	140%	98%	50%	140%	95%	50%	140%
Acenaphthylene	5969135		<0.05	<0.05	NA	< 0.05	117%	50%	140%	103%	50%	140%	95%	50%	140%
Acenaphthene	5969135		<0.05	<0.05	NA	< 0.05	109%	50%	140%	80%	50%	140%	75%	50%	140%
Fluorene	5969135		<0.05	<0.05	NA	< 0.05	109%	50%	140%	100%	50%	140%	93%	50%	140%
Phenanthrene	5969135		<0.05	<0.05	NA	< 0.05	109%	50%	140%	90%	50%	140%	85%	50%	140%
Anthracene	5969135		<0.05	<0.05	NA	< 0.05	86%	50%	140%	93%	50%	140%	88%	50%	140%
Fluoranthene	5969135		<0.05	<0.05	NA	< 0.05	113%	50%	140%	103%	50%	140%	95%	50%	140%
Pyrene	5969135		<0.05	<0.05	NA	< 0.05	111%	50%	140%	103%	50%	140%	93%	50%	140%
Benzo(a)anthracene	5969135		<0.05	<0.05	NA	< 0.05	117%	50%	140%	85%	50%	140%	110%	50%	140%
Chrysene	5969135		<0.05	<0.05	NA	< 0.05	130%	50%	140%	75%	50%	140%	110%	50%	140%
Benzo(b)fluoranthene	5969135		<0.05	<0.05	NA	< 0.05	119%	50%	140%	110%	50%	140%	88%	50%	140%
Benzo(k)fluoranthene	5969135		<0.05	<0.05	NA	< 0.05	130%	50%	140%	105%	50%	140%	83%	50%	140%
Benzo(a)pyrene	5969135		<0.05	<0.05	NA	< 0.05	136%	50%	140%	95%	50%	140%	108%	50%	140%
Indeno(1,2,3-cd)pyrene	5969135		<0.05	<0.05	NA	< 0.05	105%	50%	140%	88%	50%	140%	100%	50%	140%
Dibenz(a,h)anthracene	5969135		<0.05	<0.05	NA	< 0.05	102%	50%	140%	98%	50%	140%	78%	50%	140%
Benzo(g,h,i)perylene	5969135		<0.05	<0.05	NA	< 0.05	106%	50%	140%	90%	50%	140%	103%	50%	140%
O. Reg. 153(511) - PCBs (Soil)															
Polychlorinated Biphenyls	5974332		< 0.1	< 0.1	NA	< 0.1	102%	50%	140%	93%	50%	140%	100%	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).

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 to C10)	5968695	5968695	<5	<5	NA	< 5	130%	60%	140%	126%	60%	140%	86%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5968695	5968695	<0.05	<0.05	NA	< 0.05	90%	50%	140%	99%	50%	140%	81%	50%	140%
Vinyl Chloride	5968695	5968695	<0.02	<0.02	NA	< 0.02	96%	50%	140%	118%	50%	140%	127%	50%	140%
Bromomethane	5968695	5968695	<0.05	<0.05	NA	< 0.05	107%	50%	140%	119%	50%	140%	125%	50%	140%
Trichlorofluoromethane	5968695	5968695	<0.05	<0.05	NA	< 0.05	101%	50%	140%	116%	50%	140%	126%	50%	140%
Acetone	5968695	5968695	<0.50	<0.50	NA	< 0.50	109%	50%	140%	93%	50%	140%	86%	50%	140%
1,1-Dichloroethylene	5968695	5968695	< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	90%	60%	130%	91%	50%	140%
Methylene Chloride	5968695	5968695	<0.05	<0.05	NA	< 0.05	97%	50%	140%	109%	60%	130%	89%	50%	140%
Trans- 1,2-Dichloroethylene	5968695	5968695	<0.05	<0.05	NA	< 0.05	95%	50%	140%	97%	60%	130%	103%	50%	140%
Methyl tert-butyl Ether	5968695	5968695	<0.05	<0.05	NA	< 0.05	84%	50%	140%	97%	60%	130%	70%	50%	140%
1,1-Dichloroethane	5968695	5968695	<0.02	<0.02	NA	< 0.02	113%	50%	140%	106%	60%	130%	99%	50%	140%

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Quality Assurance

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD
AGAT WORK ORDER: 24T168041
PROJECT: SP23-01265-01
ATTENTION TO: Fuzail Patel
SAMPLING SITE:159 Confederation Street
SAMPLED BY:Fuzail

Trace Organics Analysis (Continued)

RPT Date: Jul 09, 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
Methyl Ethyl Ketone	5968695	5968695	<0.50	<0.50	NA	< 0.50	115%	50%	140%	90%	50%	140%	92%	50%	140%
Cis- 1,2-Dichloroethylene	5968695	5968695	<0.02	<0.02	NA	< 0.02	91%	50%	140%	92%	60%	130%	97%	50%	140%
Chloroform	5968695	5968695	<0.04	<0.04	NA	< 0.04	98%	50%	140%	103%	60%	130%	108%	50%	140%
1,2-Dichloroethane	5968695	5968695	<0.03	<0.03	NA	< 0.03	106%	50%	140%	109%	60%	130%	99%	50%	140%
1,1,1-Trichloroethane	5968695	5968695	<0.05	<0.05	NA	< 0.05	62%	50%	140%	63%	60%	130%	65%	50%	140%
Carbon Tetrachloride	5968695	5968695	<0.05	<0.05	NA	< 0.05	62%	50%	140%	60%	60%	130%	60%	50%	140%
Benzene	5968695	5968695	<0.02	<0.02	NA	< 0.02	96%	50%	140%	95%	60%	130%	103%	50%	140%
1,2-Dichloropropane	5968695	5968695	<0.03	<0.03	NA	< 0.03	94%	50%	140%	91%	60%	130%	105%	50%	140%
Trichloroethylene	5968695	5968695	<0.03	<0.03	NA	< 0.03	69%	50%	140%	68%	60%	130%	91%	50%	140%
Bromodichloromethane	5968695	5968695	<0.05	<0.05	NA	< 0.05	65%	50%	140%	66%	60%	130%	66%	50%	140%
Methyl Isobutyl Ketone	5968695	5968695	<0.50	<0.50	NA	< 0.50	106%	50%	140%	114%	50%	140%	117%	50%	140%
1,1,2-Trichloroethane	5968695	5968695	<0.04	<0.04	NA	< 0.04	103%	50%	140%	105%	60%	130%	110%	50%	140%
Toluene	5968695	5968695	<0.05	<0.05	NA	< 0.05	108%	50%	140%	103%	60%	130%	96%	50%	140%
Dibromochloromethane	5968695	5968695	<0.05	<0.05	NA	< 0.05	62%	50%	140%	65%	60%	130%	74%	50%	140%
Ethylene Dibromide	5968695	5968695	<0.04	<0.04	NA	< 0.04	78%	50%	140%	80%	60%	130%	84%	50%	140%
Tetrachloroethylene	5968695	5968695	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	90%	60%	130%	91%	50%	140%
1,1,1,2-Tetrachloroethane	5968695	5968695	<0.04	<0.04	NA	< 0.04	65%	50%	140%	68%	60%	130%	64%	50%	140%
Chlorobenzene	5968695	5968695	<0.05	<0.05	NA	< 0.05	92%	50%	140%	90%	60%	130%	105%	50%	140%
Ethylbenzene	5968695	5968695	<0.05	<0.05	NA	< 0.05	98%	50%	140%	94%	60%	130%	108%	50%	140%
m & p-Xylene	5968695	5968695	<0.05	<0.05	NA	< 0.05	105%	50%	140%	102%	60%	130%	119%	50%	140%
Bromoform	5968695	5968695	<0.05	<0.05	NA	< 0.05	92%	50%	140%	65%	60%	130%	75%	50%	140%
Styrene	5968695	5968695	<0.05	<0.05	NA	< 0.05	76%	50%	140%	74%	60%	130%	87%	50%	140%
1,1,2,2-Tetrachloroethane	5968695	5968695	<0.05	<0.05	NA	< 0.05	106%	50%	140%	101%	60%	130%	76%	50%	140%
o-Xylene	5968695	5968695	<0.05	<0.05	NA	< 0.05	104%	50%	140%	101%	60%	130%	110%	50%	140%
1,3-Dichlorobenzene	5968695	5968695	<0.05	<0.05	NA	< 0.05	85%	50%	140%	81%	60%	130%	99%	50%	140%
1,4-Dichlorobenzene	5968695	5968695	<0.05	<0.05	NA	< 0.05	90%	50%	140%	80%	60%	130%	93%	50%	140%
1,2-Dichlorobenzene	5968695	5968695	<0.05	<0.05	NA	< 0.05	78%	50%	140%	74%	60%	130%	84%	50%	140%
n-Hexane	5968695	5968695	<0.05	<0.05	NA	< 0.05	81%	50%	140%	72%	60%	130%	92%	50%	140%

Certified By: N Popnikolof

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QC Exceedance

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

ATTENTION TO: Fuzail Patel

RPT Date: Jul 09, 2024

PARAMETER	Sample Id	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)										
Molybdenum	5968690	138%	70%	130%	110%	80%	120%	107%	70%	130%

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.
More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.
Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

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Method Summary

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

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Method Summary

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD
AGAT WORK ORDER: 24T168041
PROJECT: SP23-01265-01
ATTENTION TO: Fuzail Patel
SAMPLING SITE:159 Confederation Street
SAMPLED BY:Fuzail

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

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Method Summary

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

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SAMPLING SITE:159 Confederation Street

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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
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
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

AGAT WORK ORDER: 24T168041

PROJECT: SP23-01265-01

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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

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 #: 24T168041

Cooler Quantity: 1L

Arrival Temperatures: 6·5 6·8 7·0

Custody Seal Intact: ☐ Yes ☐ No ☑ N/A

Notes: L, T

Report Information:

Company: Sirati & Partners
Contact: Fuzail
Address: Unit 4, 160 Konrad Crescent, Markham, ON
Phone: 905-940-1582 Fax: 905-940-2440
Reports to be sent to:
1. Email: fuzail@sirati.ca
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

- ☑ Regulation 153/04 — Table 8 (Indicate One) — ☑ Ind/Com ☑ Res/Park ☐ Agriculture
- Soil Texture (Check One): ☐ Coarse ☐ Fine
- ☐ Excess Soils R406 — Table (Indicate One)
- ☐ 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?** ☑ 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 CPM

Project Information:

Project: SP23-01265-01
Site Location: 159 Confederation Street
Sampled By: Fuzail
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:

Sample Matrix Legend

B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

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 Analyze F4G if required ☐ Yes ☐ No	PAHs	PCBs	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ Biphenyl ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH/MW-101 SS3	19-06-2024	AM/PM	4	S	Use sample ID as mentioned in		☑		☑	☑	☑	☑					
BH/MW-102 SS5	19-06-2024	AM/PM	4	S	COC.		☑		☑	☑	☑	☑					
BH/MW-103 SS4	20-06-2024	AM/PM	4	S			☑		☑	☑	☑	☑					
BH/MW-104 SS4	20-06-2024	AM/PM	4	S			☑		☑	☑	☑	☑					
BH-105 SS1	21-06-2024	AM/PM	4	S			☑		☑	☑	☑	☑					
BH-106 SS2	21-06-2024	AM/PM	4	S			☑		☑	☑	☑	☑					
BH-107 SS1	21-06-2024	AM/PM	4	S			☑		☑	☑	☑	☑					
BH-108 SS2	21-06-2024	AM/PM	4	S			☑		☑	☑	☑	☑					
BH-109 SS1	21-06-2024	AM/PM	4	S			☑		☑	☑	☑	☑					
BH-110 SS2	21-06-2024	AM/PM	4	S			☑		☑	☑	☑	☑					
Dup-1	21-06-2024	AM/PM	4	S			☑		☑	☑	☑	☑					

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Fuzail Patel Patel.F.F.	26-06-2024			Jun 28	1:30pm
Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time

Page 1 of 1

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

APPENDIX E

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

AGAT Laboratories

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

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD
160 KONRAD CRESCENT UNIT 4
MARKHAM, ON L3R 9T9
(905) 833-1582

ATTENTION TO: Fuzail Patel

PROJECT: SP23-01265-01

AGAT WORK ORDER: 24T170499

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Inorganic Team Lead

DATE REPORTED: Jul 15, 2024

PAGES (INCLUDING COVER): 20

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

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Certificate of Analysis

AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-07-05

DATE REPORTED: 2024-07-15

		SAMPLE DESCRIPTION:		BH/MW-04	BH/MW-102	BH/MW-103
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2024-07-04	2024-07-04	2024-07-04
Parameter	Unit	G / S	RDL	5983495	5983543	5983544
Naphthalene	µg/L	11	0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	1	0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	1	0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.41	0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	4.1	0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	1	0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	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
Dibenz(a,h)anthracene	µg/L	0.2	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
2-and 1-methyl Napthalene	µg/L	3.2	0.20	<0.20	<0.20	<0.20
Sediment				2	2	2
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140		81	75	78
Acridine-d9	%	50-140		80	69	97
Terphenyl-d14	%	50-140		82	87	93

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - 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.

5983495-5983544 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: N Popnikolof

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-07-05

DATE REPORTED: 2024-07-15

		SAMPLE DESCRIPTION:		BH/MW-04	BH/MW-102	BH/MW-103
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2024-07-04	2024-07-04	2024-07-04
Parameter	Unit	G / S	RDL	5983495	5983543	5983544
Polychlorinated Biphenyls	µg/L	0.2	0.1	<0.1	<0.1	<0.1
Surrogate	Unit	Acceptable Limits				
Decachlorobiphenyl	%	60-140		119	84	108

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - 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.

5983495-5983544 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: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-07-05

DATE REPORTED: 2024-07-15

		SAMPLE DESCRIPTION:		BH/MW-04	BH/MW-102	BH/MW-103
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2024-07-04	2024-07-04	2024-07-04
Parameter	Unit	G / S	RDL	5983495	5983543	5983544
F1 (C6 to C10)	µg/L		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				2	2	2
Surrogate	Unit	Acceptable Limits				
Toluene-d8	%	50-140		98	96	99
Terphenyl	% Recovery	60-140		77	70	89

Certified By: N Popnikolof

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AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-07-05

DATE REPORTED: 2024-07-15

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - 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.

5983495-5983544 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

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Certificate of Analysis

AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-07-05

DATE REPORTED: 2024-07-15

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-07-04
Parameter	Unit	G / S	RDL	5983546
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	1.6	0.30	<0.30
Methylene Chloride	µg/L	50	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	5	0.30	<0.30
Methyl Ethyl Ketone	µg/L	1800	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2.4	0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	0.20	<0.20
1,1,1-Trichloroethane	µg/L	200	0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20
Benzene	µg/L	5	0.20	<0.20
1,2-Dichloropropane	µg/L	5	0.20	<0.20
Trichloroethylene	µg/L	1.6	0.20	<0.20
Bromodichloromethane	µg/L	16	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	0.20	<0.20
Toluene	µg/L	22	0.20	<0.20
Dibromochloromethane	µg/L	25	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	30	0.10	<0.10
Ethylbenzene	µg/L	2.4	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20

Certified By: N Popnikolof

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-07-05

DATE REPORTED: 2024-07-15

				SAMPLE DESCRIPTION:	Trip Blank
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2024-07-04
Parameter	Unit	G / S	RDL		5983546
Bromoform	µg/L	25	0.10		<0.10
Styrene	µg/L	5.4	0.10		<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	0.10		<0.10
o-Xylene	µg/L		0.10		<0.10
1,3-Dichlorobenzene	µg/L	59	0.10		<0.10
1,4-Dichlorobenzene	µg/L	1	0.10		<0.10
1,2-Dichlorobenzene	µg/L	3	0.10		<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30
Xylenes (Total)	µg/L	300	0.20		<0.20
n-Hexane	µg/L	51	0.20		<0.20
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140			106
4-Bromofluorobenzene	% Recovery	50-140			88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - 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.

5983546 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: NPopnikolof

AGAT Laboratories

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MISSISSAUGA, ONTARIO
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Certificate of Analysis

AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-07-05

DATE REPORTED: 2024-07-15

		SAMPLE DESCRIPTION:		BH/MW-04	BH/MW-102	BH/MW-103
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2024-07-04	2024-07-04	2024-07-04
Parameter	Unit	G / S	RDL	5983495	5983543	5983544
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	1.6	0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	50	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	5	0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	1800	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	2.4	0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	200	0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20	<0.20	<0.20
Benzene	µg/L	5	0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	5	0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	0.20	4.84	1.13	1.36
Bromodichloromethane	µg/L	16	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	4.7	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	22	0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	25	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	1.6	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	30	0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2.4	0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20

Certified By: NPopnikolof

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Certificate of Analysis

AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-07-05

DATE REPORTED: 2024-07-15

		SAMPLE DESCRIPTION:		BH/MW-04	BH/MW-102	BH/MW-103
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2024-07-04	2024-07-04	2024-07-04
Parameter	Unit	G / S	RDL	5983495	5983543	5983544
Bromoform	µg/L	25	0.10	<0.10	<0.10	<0.10
Styrene	µg/L	5.4	0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	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	59	0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	1	0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	3	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	300	0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	51	0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		98	96	99
4-Bromofluorobenzene	% Recovery	50-140		90	94	93

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - 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.

5983495-5983544 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

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Certificate of Analysis

AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-07-05

DATE REPORTED: 2024-07-15

		SAMPLE DESCRIPTION:		BH/MW-04	BH/MW-102	BH/MW-103
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2024-07-04	2024-07-04	2024-07-04
Parameter	Unit	G / S	RDL	5983495	5983543	5983544
Dissolved Antimony	µg/L	6	1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	25	1.0	1.0	4.0	2.1
Dissolved Barium	µg/L	1000	2.0	138	113	65.0
Dissolved Beryllium	µg/L	4	0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	5000	10.0	25.0	13.9	23.2
Dissolved Cadmium	µg/L	2.1	0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	50	2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	<0.50	5.35	<0.50
Dissolved Copper	µg/L	69	1.0	1.1	<1.0	1.2
Dissolved Lead	µg/L	10	0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	70	0.50	35.5	1.45	0.68
Dissolved Nickel	µg/L	100	1.0	<1.0	6.5	<1.0
Dissolved Selenium	µg/L	10	1.0	<1.0	<1.0	<1.0
Dissolved Silver	µg/L	1.2	0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	2	0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	20	0.50	0.95	0.92	<0.50
Dissolved Vanadium	µg/L	6.2	0.40	<0.40	<0.40	0.50
Dissolved Zinc	µg/L	890	5.0	<5.0	<5.0	<5.0
Mercury	µg/L	0.29	0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	2.000	<2.000	<2.000	<2.000
Cyanide, WAD	µg/L	52	2	<2	<2	<2
Dissolved Sodium	µg/L	490000	50	9090	3280	38400
Chloride	µg/L	790000	100	12900	1510	56400
Electrical Conductivity	uS/cm	NA	2	510	578	801
pH	pH Units		NA	7.98	7.86	7.61

Certified By: Iris Verástegui

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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

DATE RECEIVED: 2024-07-05

DATE REPORTED: 2024-07-15

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - 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.

5983495-5983544 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: Iris Verástegui

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Exceedance Summary

AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Fuzail Patel

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5983495	BH/MW-04	ON T8 GW	O. Reg. 153(511) - VOCs (with PHC) (Water)	Trichloroethylene	µg/L	1.6	4.84
5983543	BH/MW-102	ON T8 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Cobalt	µg/L	3.8	5.35

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Quality Assurance

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD
AGAT WORK ORDER: 24T170499
PROJECT: SP23-01265-01
ATTENTION TO: Fuzail Patel
SAMPLING SITE:159 Confederation Street
SAMPLED BY:Fuzail

Trace Organics Analysis

RPT Date: Jul 15, 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)	5984080		<25	<25	NA	< 25	120%	60%	140%	99%	60%	140%	89%	60%	140%
F2 (C10 to C16)	5980123		<100	<100	NA	< 100	89%	60%	140%	66%	60%	140%	69%	60%	140%
F3 (C16 to C34)	5980123		<100	<100	NA	< 100	97%	60%	140%	79%	60%	140%	94%	60%	140%
F4 (C34 to C50)	5980123		<100	<100	NA	< 100	89%	60%	140%	106%	60%	140%	86%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5984080		<0.40	<0.40	NA	< 0.40	89%	50%	140%	89%	50%	140%	62%	50%	140%
Vinyl Chloride	5984080		<0.17	<0.17	NA	< 0.17	80%	50%	140%	86%	50%	140%	107%	50%	140%
Bromomethane	5984080		<0.20	<0.20	NA	< 0.20	74%	50%	140%	78%	50%	140%	79%	50%	140%
Trichlorofluoromethane	5984080		<0.40	<0.40	NA	< 0.40	63%	50%	140%	60%	50%	140%	73%	50%	140%
Acetone	5984080		<1.0	<1.0	NA	< 1.0	104%	50%	140%	95%	50%	140%	105%	50%	140%
1,1-Dichloroethylene	5984080		<0.30	<0.30	NA	< 0.30	82%	50%	140%	66%	60%	130%	94%	50%	140%
Methylene Chloride	5984080		<0.30	<0.30	NA	< 0.30	84%	50%	140%	84%	60%	130%	95%	50%	140%
trans- 1,2-Dichloroethylene	5984080		<0.20	<0.20	NA	< 0.20	97%	50%	140%	113%	60%	130%	101%	50%	140%
Methyl tert-butyl ether	5984080		4.35	4.48	2.9%	< 0.20	103%	50%	140%	101%	60%	130%	110%	50%	140%
1,1-Dichloroethane	5984080		<0.30	<0.30	NA	< 0.30	98%	50%	140%	108%	60%	130%	112%	50%	140%
Methyl Ethyl Ketone	5984080		<1.0	<1.0	NA	< 1.0	92%	50%	140%	112%	50%	140%	90%	50%	140%
cis- 1,2-Dichloroethylene	5984080		<0.20	<0.20	NA	< 0.20	107%	50%	140%	105%	60%	130%	110%	50%	140%
Chloroform	5984080		<0.20	<0.20	NA	< 0.20	110%	50%	140%	107%	60%	130%	117%	50%	140%
1,2-Dichloroethane	5984080		<0.20	<0.20	NA	< 0.20	102%	50%	140%	80%	60%	130%	92%	50%	140%
1,1,1-Trichloroethane	5984080		<0.30	<0.30	NA	< 0.30	84%	50%	140%	76%	60%	130%	104%	50%	140%
Carbon Tetrachloride	5984080		<0.20	<0.20	NA	< 0.20	106%	50%	140%	94%	60%	130%	117%	50%	140%
Benzene	5984080		<0.20	<0.20	NA	< 0.20	89%	50%	140%	80%	60%	130%	92%	50%	140%
1,2-Dichloropropane	5984080		<0.20	<0.20	NA	< 0.20	89%	50%	140%	85%	60%	130%	104%	50%	140%
Trichloroethylene	5984080		<0.20	<0.20	NA	< 0.20	91%	50%	140%	76%	60%	130%	109%	50%	140%
Bromodichloromethane	5984080		<0.20	<0.20	NA	< 0.20	84%	50%	140%	80%	60%	130%	102%	50%	140%
Methyl Isobutyl Ketone	5984080		<1.0	<1.0	NA	< 1.0	91%	50%	140%	108%	50%	140%	102%	50%	140%
1,1,2-Trichloroethane	5984080		<0.20	<0.20	NA	< 0.20	104%	50%	140%	97%	60%	130%	108%	50%	140%
Toluene	5984080		<0.20	<0.20	NA	< 0.20	103%	50%	140%	82%	60%	130%	112%	50%	140%
Dibromochloromethane	5984080		<0.10	<0.10	NA	< 0.10	95%	50%	140%	89%	60%	130%	106%	50%	140%
Ethylene Dibromide	5984080		<0.10	<0.10	NA	< 0.10	99%	50%	140%	95%	60%	130%	105%	50%	140%
Tetrachloroethylene	5984080		<0.20	<0.20	NA	< 0.20	91%	50%	140%	74%	60%	130%	105%	50%	140%
1,1,1,2-Tetrachloroethane	5984080		<0.10	<0.10	NA	< 0.10	95%	50%	140%	84%	60%	130%	104%	50%	140%
Chlorobenzene	5984080		<0.10	<0.10	NA	< 0.10	101%	50%	140%	80%	60%	130%	104%	50%	140%
Ethylbenzene	5984080		<0.10	<0.10	NA	< 0.10	95%	50%	140%	76%	60%	130%	98%	50%	140%
m & p-Xylene	5984080		<0.20	<0.20	NA	< 0.20	98%	50%	140%	78%	60%	130%	101%	50%	140%
Bromoform	5984080		<0.10	<0.10	NA	< 0.10	117%	50%	140%	102%	60%	130%	118%	50%	140%
Styrene	5984080		<0.10	<0.10	NA	< 0.10	89%	50%	140%	71%	60%	130%	99%	50%	140%
1,1,2,2-Tetrachloroethane	5984080		<0.10	<0.10	NA	< 0.10	100%	50%	140%	107%	60%	130%	102%	50%	140%
o-Xylene	5984080		<0.10	<0.10	NA	< 0.10	104%	50%	140%	82%	60%	130%	108%	50%	140%

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Quality Assurance

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD
AGAT WORK ORDER: 24T170499
PROJECT: SP23-01265-01
ATTENTION TO: Fuzail Patel
SAMPLING SITE:159 Confederation Street
SAMPLED BY:Fuzail

Trace Organics Analysis (Continued)

RPT Date: Jul 15, 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	5984080		<0.10	<0.10	NA	< 0.10	105%	50%	140%	85%	60%	130%	102%	50%	140%
1,4-Dichlorobenzene	5984080		<0.10	<0.10	NA	< 0.10	106%	50%	140%	84%	60%	130%	102%	50%	140%
1,2-Dichlorobenzene	5984080		<0.10	<0.10	NA	< 0.10	108%	50%	140%	89%	60%	130%	100%	50%	140%
n-Hexane	5984080		<0.20	<0.20	NA	< 0.20	75%	50%	140%	78%	60%	130%	87%	50%	140%
O. Reg. 153(511) - PCBs (Water)															
Polychlorinated Biphenyls	5975268		< 0.1	< 0.1	NA	< 0.1	94%	50%	140%	100%	50%	140%	85%	50%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	5983543	5983543	<0.20	<0.20	NA	< 0.20	87%	50%	140%	67%	50%	140%	93%	50%	140%
Acenaphthylene	5983543	5983543	<0.20	<0.20	NA	< 0.20	111%	50%	140%	119%	50%	140%	85%	50%	140%
Acenaphthene	5983543	5983543	<0.20	<0.20	NA	< 0.20	108%	50%	140%	101%	50%	140%	98%	50%	140%
Fluorene	5983543	5983543	<0.20	<0.20	NA	< 0.20	110%	50%	140%	100%	50%	140%	71%	50%	140%
Phenanthrene	5983543	5983543	<0.10	<0.10	NA	< 0.10	107%	50%	140%	118%	50%	140%	116%	50%	140%
Anthracene	5983543	5983543	<0.10	<0.10	NA	< 0.10	104%	50%	140%	106%	50%	140%	74%	50%	140%
Fluoranthene	5983543	5983543	<0.20	<0.20	NA	< 0.20	123%	50%	140%	87%	50%	140%	83%	50%	140%
Pyrene	5983543	5983543	<0.20	<0.20	NA	< 0.20	66%	50%	140%	85%	50%	140%	79%	50%	140%
Benzo(a)anthracene	5983543	5983543	<0.20	<0.20	NA	< 0.20	96%	50%	140%	111%	50%	140%	88%	50%	140%
Chrysene	5983543	5983543	<0.10	<0.10	NA	< 0.10	116%	50%	140%	76%	50%	140%	77%	50%	140%
Benzo(b)fluoranthene	5983543	5983543	<0.10	<0.10	NA	< 0.10	118%	50%	140%	76%	50%	140%	68%	50%	140%
Benzo(k)fluoranthene	5983543	5983543	<0.10	<0.10	NA	< 0.10	90%	50%	140%	75%	50%	140%	76%	50%	140%
Benzo(a)pyrene	5983543	5983543	<0.01	<0.01	NA	< 0.01	87%	50%	140%	112%	50%	140%	71%	50%	140%
Indeno(1,2,3-cd)pyrene	5983543	5983543	<0.20	<0.20	NA	< 0.20	80%	50%	140%	107%	50%	140%	85%	50%	140%
Dibenz(a,h)anthracene	5983543	5983543	<0.20	<0.20	NA	< 0.20	102%	50%	140%	88%	50%	140%	87%	50%	140%
Benzo(g,h,i)perylene	5983543	5983543	<0.20	<0.20	NA	< 0.20	88%	50%	140%	73%	50%	140%	77%	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 Popnikolof

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Quality Assurance

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD
AGAT WORK ORDER: 24T170499
PROJECT: SP23-01265-01
ATTENTION TO: Fuzail Patel
SAMPLING SITE:159 Confederation Street
SAMPLED BY:Fuzail

Water Analysis

RPT Date: Jul 15, 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	5983915		<1.0	<1.0	NA	< 1.0	100%	70%	130%	109%	80%	120%	107%	70%	130%
Dissolved Arsenic	5983915		5.1	4.8	NA	< 1.0	97%	70%	130%	106%	80%	120%	105%	70%	130%
Dissolved Barium	5983915		40.3	40.8	1.2%	< 2.0	100%	70%	130%	108%	80%	120%	107%	70%	130%
Dissolved Beryllium	5983915		<0.50	<0.50	NA	< 0.50	103%	70%	130%	109%	80%	120%	107%	70%	130%
Dissolved Boron	5983915		619	614	0.8%	< 10.0	99%	70%	130%	107%	80%	120%	107%	70%	130%
Dissolved Cadmium	5983915		<0.20	<0.20	NA	< 0.20	100%	70%	130%	100%	80%	120%	108%	70%	130%
Dissolved Chromium	5983915		<2.0	<2.0	NA	< 2.0	99%	70%	130%	104%	80%	120%	108%	70%	130%
Dissolved Cobalt	5983915		<0.50	<0.50	NA	< 0.50	97%	70%	130%	111%	80%	120%	108%	70%	130%
Dissolved Copper	5983915		<1.0	<1.0	NA	< 1.0	100%	70%	130%	101%	80%	120%	102%	70%	130%
Dissolved Lead	5983915		<0.50	<0.50	NA	< 0.50	98%	70%	130%	104%	80%	120%	100%	70%	130%
Dissolved Molybdenum	5983915		101	98.8	2.2%	< 0.50	102%	70%	130%	108%	80%	120%	99%	70%	130%
Dissolved Nickel	5983915		<1.0	2.0	NA	< 1.0	97%	70%	130%	111%	80%	120%	105%	70%	130%
Dissolved Selenium	5983915		<1.0	1.5	NA	< 1.0	102%	70%	130%	103%	80%	120%	106%	70%	130%
Dissolved Silver	5983915		<0.20	<0.20	NA	< 0.20	101%	70%	130%	112%	80%	120%	80%	70%	130%
Dissolved Thallium	5983915		<0.30	<0.30	NA	< 0.30	99%	70%	130%	104%	80%	120%	101%	70%	130%
Dissolved Uranium	5983915		<0.50	<0.50	NA	< 0.50	102%	70%	130%	109%	80%	120%	106%	70%	130%
Dissolved Vanadium	5983915		<0.40	0.46	NA	< 0.40	103%	70%	130%	114%	80%	120%	117%	70%	130%
Dissolved Zinc	5983915		<5.0	<5.0	NA	< 5.0	100%	70%	130%	108%	80%	120%	117%	70%	130%
Mercury	5982403		<0.02	<0.02	NA	< 0.02	100%	70%	130%	102%	80%	120%	93%	70%	130%
Chromium VI	5980259		<2.000	<2.000	NA	< 2	101%	70%	130%	96%	80%	120%	100%	70%	130%
Cyanide, WAD	5980259		<2	<2	NA	< 2	109%	70%	130%	114%	80%	120%	119%	70%	130%
Dissolved Sodium	5983915		68800	66900	2.8%	< 50	100%	70%	130%	112%	80%	120%	91%	70%	130%
Chloride	5981547		25100	25500	1.6%	< 100	94%	70%	130%	102%	80%	120%	103%	70%	130%
Electrical Conductivity	5984327		9780	10000	2.2%	< 2	102%	90%	110%						
pH	5984327		7.25	7.30	0.7%	NA	99%	90%	110%						

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: Iris Verástegui

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Method Summary

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD
AGAT WORK ORDER: 24T170499
PROJECT: SP23-01265-01
ATTENTION TO: Fuzail Patel
SAMPLING SITE:159 Confederation Street
SAMPLED BY:Fuzail

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
Polychlorinated Biphenyls	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
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

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Method Summary

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AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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
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

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Method Summary

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AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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
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

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Method Summary

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AGAT WORK ORDER: 24T170499

PROJECT: SP23-01265-01

ATTENTION TO: Fuzail Patel

SAMPLING SITE:159 Confederation Street

SAMPLED BY:Fuzail

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
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Mississauga, Ontario L4Z 1Y2
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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 #: 24170499
Cooler Quantity: 1 large
Arrival Temperatures: 6.4 | 5.9 | 6.0
Custody Seal Intact: ☐ Yes ☐ No ☑ N/A
Notes: loose ice

Report Information:
Company: Sirati & Partners
Contact: Fuzail
Address: Unit 4, 160 Konrad Crescent, Markham, ON
Phone: 905-940-1582 Fax: 905-940-2440
Reports to be sent to:
1. Email: fuzail@sirati.ca
2. Email:

Project Information:
Project: SP23-01265-01
Site Location: 159 Confederation Street
Sampled By: Fuzail
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 8 (Indicate One)
☑ Ind/Com
☑ Res/Park
☐ Agriculture
Soil Texture (Check One)
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)
☐ 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?** ☑ 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 CPM

Sample Matrix Legend
B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

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 Analyze F4G if required ☐ Yes ☐ No	PAHs	PCBs	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
~~BH/MW-04~~	~~04-07-2024~~	AM PM		~~GW~~	~~Use sample ID as mentioned in~~		☑		☑	☑	☑	☑					
BH/MW-102	04-07-2024	AM PM		GW	COC.		☑		☑	☑	☑	☑					
BH/MW-103	04-07-2024	AM PM		GW			☑		☑	☑	☑	☑					
Trip blank	04-07-2024	AM PM		GW								☑					
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Fuzail Patel Patel.F.F.	04-07-2024		T Hayes	July 5	1pm

Page 1 of 1
N°:

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

APPENDIX F

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

Project No.: SP24-01265-00

Phase Two Environmental Site Assessment

159 Confederation Street, Town of Halton Hills, ON

Soil Sample Analytical Protocol

Sample Location	Sample ID	Date of Sampling	Sample Depth (mbgs)	Chemical Analysis	Rationale
BH/MW-101	BH/MW-101 SS3	19-06-2024	1.5 - 2.0	M&I, PHC, BTEX, VOCS, PAHs, and PCBs	To assess soil quality
BH/MW-102	BH/MW-102 SS5	19-06-2024	3.0 - 3.5	M&I, PHC, BTEX, VOCS, PAHs, and PCBs	To assess soil quality
BH/MW-103	BH/MW-103 SS4	20-06-2024	2.3 - 2.7	M&I, PHC, BTEX, VOCS, PAHs, and PCBs	To assess soil quality
BH/MW-104	BH/MW-104 SS4	20-06-2024	2.3 - 2.7	M&I, PHC, BTEX, VOCS, PAHs, and PCBs	To assess soil quality
BH-105	BH-105 SS1	21-06-2024	0.2 - 0.5	M&I, PHC, BTEX, VOCS, PAHs, and PCBs	To assess soil quality
BH-106	BH-106 SS2	21-06-2024	0.5 - 1.0	M&I, PHC, BTEX, VOCS, PAHs, and PCBs	To assess soil quality
BH-107	BH-107 SS1	21-06-2024	0.2 - 0.5	M&I, PHC, BTEX, VOCS, PAHs, and PCBs	To assess soil quality
BH-108	BH-108 SS2	21-06-2024	0.5 - 1.0	M&I, PHC, BTEX, VOCS, PAHs, and PCBs	To assess soil quality
	Dup-1	21-06-2024	0.5 - 1.0	M&I, PHC, BTEX, VOCS, PAHs, and PCBs	To assess soil quality
BH-109	BH-109 SS1	21-06-2024	0.2 - 0.5	M&I, PHC, BTEX, VOCS, PAHs, and PCBs	To assess soil quality
BH-110	BH-110 SS2	21-06-2024	0.5 - 1.0	M&I, PHC, BTEX, VOCS, PAHs, and PCBs	To assess soil quality

Notes:

M&I = metals and inorganics

PHCs = petroleum hydrocarbons

VOCs = volatile organic compounds

PAHs = polycyclic aromatic hydrocarbons

BTEX = benzene, toluene, ethylbenzene and xylene

PCBs = polychlorinated biphenyls

Project No.: SP24-01265-00
Phase Two Environmental Site Assessment
159 Confederation Street, Town of Halton Hills, ON
Table 1: Soil Analytical Result - Metals and Inorganics

Sample Location				BH/MW-101	BH/MW-102	BH/MW-103	BH/MW-104	BH-105	BH-106	BH-107	BH-108	BH-108	BH-109	BH-110
Sample ID				BH/MW-101 SS3	BH/MW-102 SS5	BH/MW-103 SS4	BH/MW-104 SS4	BH-105 SS1	BH-106 SS2	BH-107 SS1	BH-108 SS2	Dup-1	BH-109 SS1	BH-110 SS2
Sampling Date				19-06-2024	19-06-2024	20-06-2024	20-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024
Laboratory ID				5968690	5968693	5968694	5968695	5968696	5968697	5968698	5968699	5968702	5968700	5968701
Parameter	Unit	MECP Table 9 RPIICC Standards	RDL											
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	4	2	5	4	5	5	3	4	4	2	6
Barium	µg/g	220	2	55.5	48.3	58.1	78.2	60.2	122	102	63.2	57.9	54.5	68.6
Beryllium	µg/g	2.5	0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.6	<0.5	0.6	<0.5	<0.5	<0.5
Boron	µg/g	36	5	7	6	7	7	8	19	<5	5	<5	<5	6
Boron (Hot Water Soluble)	µg/g	1.5	0.1	<0.10	<0.10	<0.10	<0.10	0.42	<0.10	0.14	<0.10	<0.10	<0.10	0.16
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	10	8	16	15	17	17	13	16	16	14	15
Cobalt	µg/g	22	0.8	4.5	3.8	8.0	6.8	8	9.2	5.8	7.2	7.1	5.5	5.9
Copper	µg/g	92	1	28.7	12.1	28.8	25.4	28.8	40.1	13	15.8	14.8	8.6	20.4
Lead	µg/g	120	1	7	4	7	6	12	10	9	11	10	7	10
Molybdenum	µg/g	2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	82	1	11	7	18	14	17	18	10	13	13	11	13
Selenium	µg/g	1.5	0.8	0.9	<0.8	<0.8	<0.8	<0.8	1.1	<0.8	1.1	0.8	<0.8	0.9
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	0.54	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	µg/g	86	2	15.7	16.0	26.0	22.9	28.3	25.1	26.1	30.4	30.6	25.4	25.3
Zinc	µg/g	290	5	31	24	43	36	53	51	50	36	35	36	51
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.086	0.077	0.119	0.095	0.15	0.1	0.091	0.06	0.053	0.046	0.109
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	1.760	0.595	0.522	0.350	0.177	0.189	0.184	0.192	0.152	0.169	0.147
pH, 2:1 CaCl2 Extraction	pH Units		NA	6.50	6.51	6.64	6.73	6.67	6.59	6.31	6.26	6.62	6.13	6.33

MECP Table 9 RPIICC Standards = Ministry of Environment, Conservation and Parks (MECP) Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition - Soil Standards (course) - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

RDL = Report Detection Limit

Project No.: SP24-01265-00
Phase Two Environmental Site Assessment
159 Confederation Street, Town of Halton Hills, ON
Table 2: Soil Analytical Result - PAHs (Soil)

Sample Location				BH/MW-101	BH/MW-102	BH/MW-103	BH/MW-104	BH-105	BH-106	BH-107	BH-108	BH-108	BH-109	BH-110
Sample ID				BH/MW-101 SS3	BH/MW-102 SS5	BH/MW-103 SS4	BH/MW-104 SS4	BH-105 SS1	BH-106 SS2	BH-107 SS1	BH-108 SS2	Dup-1	BH-109 SS1	BH-110 SS2
Sampling Date				19-06-2024	19-06-2024	20-06-2024	20-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024
Laboratory ID				5968690	5968693	5968694	5968695	5968696	5968697	5968698	5968699	5968702	5968700	5968701
Parameter	Unit	MECP Table 9 RPIICC Standards	RDL											
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.19	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.22	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	0.13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.23	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	0.59	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene-d8	%		1	80	80	75	85	70	85	85	85	80	75	70
Acridine-d9	%		1	90	95	85	95	90	95	90	105	105	95	105
Terphenyl-d14	%		1	100	70	70	85	100	95	70	70	80	95	95
Moisture Content	%		0.1	2.5	10.2	13.6	11.9	17.5	8	13.1	9.2	13.1	46.3	18.6

MECP Table 9 RPIICC Standards = Ministry of Environment, Conservation and Parks (MECP) Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition - Soil Standards (course) - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

RDL = Report Detection Limit

Project No.: SP24-01265-00
Phase Two Environmental Site Assessment
159 Confederation Street, Town of Halton Hills, ON
Table 3: Soil Analytical Result - PCBs

Sample Location				BH/MW-101	BH/MW-102	BH/MW-103	BH/MW-104	BH-105	BH-106	BH-107	BH-108	BH-108	BH-109	BH-110
Sample ID				BH/MW-101 SS3	BH/MW-102 SS5	BH/MW-103 SS4	BH/MW-104 SS4	BH-105 SS1	BH-106 SS2	BH-107 SS1	BH-108 SS2	Dup-1	BH-109 SS1	BH-110 SS2
Sampling Date				19-06-2024	19-06-2024	20-06-2024	20-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024
Laboratory ID				5968690	5968693	5968694	5968695	5968696	5968697	5968698	5968699	5968702	5968700	5968701
Parameter	**Unit**	**MECP Table 9 RPIICC Standards**	**RDL**											
Polychlorinated Biphenyls	µg/g	0.3	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Decachlorobiphenyl	%		1	104	100	100	80	84	88	116	112	116	104	112
Moisture Content	%		0.1	2.5	10.2	13.6	11.9	17.5	8	13.1	9.2	13.1	46.3	18.6

MECP Table 9 RPIICC Standards = Ministry of Environment, Conservation and Parks (MECP) Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition - Soil Standards (course) - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

RDL = Report Detection Limit

Project No.: SP24-01265-00
Phase Two Environmental Site Assessment
159 Confederation Street, Town of Halton Hills, ON

Table 4: Soil Analytical Results -Petroleum Hydrocarbons (PHCs)

Sample Location				BH/MW-101	BH/MW-102	BH/MW-103	BH/MW-104	BH-105	BH-106	BH-107	BH-108	BH-108	BH-109	BH-110
Sample ID				BH/MW-101 SS3	BH/MW-102 SS5	BH/MW-103 SS4	BH/MW-104 SS4	BH-105 SS1	BH-106 SS2	BH-107 SS1	BH-108 SS2	Dup-1	BH-109 SS1	BH-110 SS2
Sampling Date				19-06-2024	19-06-2024	20-06-2024	20-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024
Laboratory ID				5968690	5968693	5968694	5968695	5968696	5968697	5968698	5968699	5968702	5968700	5968701
Parameter	**Unit**	**MECP Table 9 RPIICC Standards**	**RDL**											
F1 (C6 to C10)	µg/g		5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Toluene-d8	%		1	76	93	74	76	72	75	80	74	75	71	72
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	2.5	10.2	13.6	11.9	17.5	8	13.1	9.2	13.1	46.3	18.6
Terphenyl	%		1	86	98	95	97	85	98	71	100	87	74	74

MECP Table 9 RPIICC Standards = Ministry of Environment, Conservation and Parks (MECP) Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition - Soil Standards (course) - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

RDL = Report Detection Limit

Project No.: SP24-01265-00
Phase Two Environmental Site Assessment
159 Confederation Street, Town of Halton Hills, ON
Table 5: Soil Analytical Result - Volatile Organic Compounds (VOCs) with (PHC)

Sample Location				BH/MW-101	BH/MW-102	BH/MW-103	BH/MW-104	BH-105	BH-106	BH-107	BH-108	BH-108	BH-109	BH-110
Sample ID				BH/MW-101 SS3	BH/MW-102 SS5	BH/MW-103 SS4	BH/MW-104 SS4	BH-105 SS1	BH-106 SS2	BH-107 SS1	BH-108 SS2	Dup-1	BH-109 SS1	BH-110 SS2
Sampling Date				19-06-2024	19-06-2024	20-06-2024	20-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024	21-06-2024
Laboratory ID				5968690	5968693	5968694	5968695	5968696	5968697	5968698	5968699	5968702	5968700	5968701
Parameter	Unit	MECP Table 9 RPIICC Standards	RDL											
Dichlorodifluoromethane	µg/g	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
Vinyl Chloride	ug/g	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
Bromomethane	ug/g	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
Trichlorofluoromethane	ug/g	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
Acetone	ug/g	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
1,1-Dichloroethylene	ug/g	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	ug/g	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
Trans- 1,2-Dichloroethylene	ug/g	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 tert-butyl Ether	ug/g	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	ug/g	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
Methyl Ethyl Ketone	ug/g	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
Cis- 1,2-Dichloroethylene	ug/g	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
Chloroform	ug/g	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
1,2-Dichloroethane	ug/g	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
1,1,1-Trichloroethane	ug/g	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	ug/g	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
Benzene	ug/g	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
1,2-Dichloropropane	ug/g	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
Trichloroethylene	ug/g	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
Bromodichloromethane	ug/g	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 Isobutyl Ketone	ug/g	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
1,1,2-Trichloroethane	ug/g	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
Toluene	ug/g	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
Dibromochloromethane	ug/g	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	ug/g	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
Tetrachloroethylene	ug/g	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	ug/g	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
Chlorobenzene	ug/g	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	ug/g	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
m & p-Xylene	ug/g		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	ug/g	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	ug/g	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
1,1,2,2-Tetrachloroethane	ug/g	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
o-Xylene	ug/g		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	ug/g	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	ug/g	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	ug/g	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
Xylenes (Total)	ug/g	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-Dichloropropene (Cis + Trans)	µg/g	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
n-Hexane	µg/g	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-d8	% Recovery		1	76	93	74	76	72	75	80	74	75	71	72
4-Bromofluorobenzene	% Recovery		1	83	80	68	63	67	72	81	83	79	77	85
Moisture Content	%		0.1	2.5	10.2	13.6	11.9	17.5	8	13.1	9.2	13.1	46.3	18.6

MECP Table 9 RPIICC Standards = Ministry of Environment, Conservation and Parks (MECP) Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition - Soil Standards (course) - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

RDL = Report Detection Limit

Soil Maximum Concentration Data

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Phase Two Environmental Site Assessment
159 Confederation Street, Town of Halton Hills, ON

Summary of Metals & Inorganics (M&I):

Parameter	Unit	MECP Table 9 RPIICC Standards	Maximum Concentration	Sample ID
Antimony	µg/g	1.3	<0.8	All soil Samples
Arsenic	µg/g	18	6	BH-110 SS2
Barium	µg/g	220	122.00	BH-106 SS2
Beryllium	µg/g	2.5	0.60	BH-106 SS2
Boron	µg/g	36	19.00	BH-106 SS2
Boron (Hot Water Soluble)	µg/g	1.5	0.42	BH-105 SS1
Cadmium	µg/g	1.2	<0.5	All soil Samples
Chromium	µg/g	70	17	BH-105 SS1
Cobalt	µg/g	22	9.2	BH-106 SS2
Copper	µg/g	92	40.1	BH-106 SS2
Lead	µg/g	120	12	BH-105 SS1
Molybdenum	µg/g	2	<0.5	All soil Samples
Nickel	µg/g	82	18	BH-106 SS2
Selenium	µg/g	1.5	1.1	BH-106 SS2, BH-108 SS2
Silver	µg/g	0.5	<0.5	All soil Samples
Thallium	µg/g	1	<0.5	All soil Samples
Uranium	µg/g	2.5	0.54	BH-106 SS2
Vanadium	µg/g	86	30.6	Dup-1 (BH-108 SS2)
Zinc	µg/g	290	53	BH-105 SS1
Chromium, Hexavalent	µg/g	0.66	<0.2	All soil Samples
Cyanide, WAD	µg/g	0.051	<0.040	All soil Samples
Mercury	µg/g	0.27	<0.10	All soil Samples
Electrical Conductivity (2:1)	mS/cm	0.7	0.15	BH-105 SS1
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	1.76	BH/MW-101 SS3
pH, 2:1 CaCl2 Extraction	pH Units		6.73	BH/MW-104 SS4

Summary of Petroleum Hydrocarbons

Parameter	Unit	MECP Table 9 RPIICC Standards	Maximum Concentration	Sample ID
F1 (C6 to C10)	µg/g		<5	All soil Samples
F1 (C6 to C10) minus BTEX	µg/g	25	<5	All soil Samples
Toluene-d8	%		93	All soil Samples
F2 (C10 to C16)	µg/g	10	<10	All soil Samples
F2 (C10 to C16) minus Naphthalene	µg/g		<10	All soil Samples
F3 (C16 to C34)	µg/g	240	<50	All soil Samples
F3 (C16 to C34) minus PAHs	µg/g		<50	All soil Samples
F4 (C34 to C50)	µg/g	120	<50	All soil Samples
Gravimetric Heavy Hydrocarbons	µg/g	120	NA	All soil Samples
Moisture Content	%		46.3	BH-109 SS1
Terphenyl	%		100	BH-108 SS2

Summary of PAHs (Soil)

Parameter	Unit	MECP Table 9 RPIICC Standards	Maximum Concentration	Sample ID
Naphthalene	µg/g	0.09	<0.05	All soil Samples
Acenaphthylene	µg/g	0.093	<0.05	All soil Samples
Acenaphthene	µg/g	0.072	<0.05	All soil Samples
Fluorene	µg/g	0.19	<0.05	All soil Samples
Phenanthrene	µg/g	0.69	<0.05	All soil Samples
Anthracene	µg/g	0.22	<0.05	All soil Samples
Fluoranthene	µg/g	0.69	0.13	BH-105 SS1
Pyrene	µg/g	1	0.11	BH-105 SS1
Benzo(a)anthracene	µg/g	0.36	<0.05	All soil Samples
Chrysene	µg/g	2.8	<0.05	All soil Samples
Benzo(b)fluoranthene	µg/g	0.47	0.06	BH-105 SS1
Benzo(k)fluoranthene	µg/g	0.48	0.06	BH-105 SS1
Benzo(a)pyrene	µg/g	0.3	<0.05	All soil Samples
Indeno(1,2,3-cd)pyrene	µg/g	0.23	<0.05	All soil Samples
Dibenz(a,h)anthracene	µg/g	0.1	<0.05	All soil Samples
Benzo(g,h,i)perylene	µg/g	0.68	<0.05	All soil Samples
2-and 1-methyl Naphthalene	µg/g	0.59	<0.05	All soil Samples
Naphthalene-d8	%		85	BH/MW-104 SS4, BH-106 SS2, BH-107 SS1, BH-108 SS2
Acridine-d9	%		105	BH-108 SS2, BH-110 SS2
Terphenyl-d14	%		100	BH/MW-101 SS3, BH-105 SS1
Moisture Content	%		46.3	BH-109 SS1

Soil Maximum Concentration Data

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Summary of PCBs

Parameter	Unit	MECP Table 9 RPIICC Standards	Maximum Concentration	Sample ID
Polychlorinated Biphenyls	µg/g	0.3	<0.1	All soil Samples
Decachlorobiphenyl	%		116	BH-107 SS1
Moisture Content	%		46.3	BH-109 SS1

Summary of VOC

Parameter	Unit	MECP Table 9 RPIICC Standards	Maximum Concentration	Sample ID
Dichlorodifluoromethane	µg/g	0.05	<0.05	All soil Samples
Vinyl Chloride	ug/g	0.02	<0.02	All soil Samples
Bromomethane	ug/g	0.05	<0.05	All soil Samples
Trichlorofluoromethane	ug/g	0.25	<0.05	All soil Samples
Acetone	ug/g	0.5	<0.50	All soil Samples
1,1-Dichloroethylene	ug/g	0.05	<0.05	All soil Samples
Methylene Chloride	ug/g	0.05	<0.05	All soil Samples
Trans- 1,2-Dichloroethylene	ug/g	0.05	<0.05	All soil Samples
Methyl tert-butyl Ether	ug/g	0.05	<0.05	All soil Samples
1,1-Dichloroethane	ug/g	0.05	<0.02	All soil Samples
Methyl Ethyl Ketone	ug/g	0.5	<0.50	All soil Samples
Cis- 1,2-Dichloroethylene	ug/g	0.05	<0.02	All soil Samples
Chloroform	ug/g	0.05	<0.04	All soil Samples
1,2-Dichloroethane	ug/g	0.05	<0.03	All soil Samples
1,1,1-Trichloroethane	ug/g	0.05	<0.05	All soil Samples
Carbon Tetrachloride	ug/g	0.05	<0.05	All soil Samples
Benzene	ug/g	0.02	<0.02	All soil Samples
1,2-Dichloropropane	ug/g	0.05	<0.03	All soil Samples
Trichloroethylene	ug/g	0.05	<0.03	BH-102 SS1
Bromodichloromethane	ug/g	0.05	<0.05	All soil Samples
Methyl Isobutyl Ketone	ug/g	0.5	<0.50	All soil Samples
1,1,2-Trichloroethane	ug/g	0.05	<0.04	All soil Samples
Toluene	ug/g	0.2	<0.05	All soil Samples
Dibromochloromethane	ug/g	0.05	<0.05	All soil Samples
Ethylene Dibromide	ug/g	0.05	<0.04	All soil Samples
Tetrachloroethylene	ug/g	0.05	<0.05	All soil Samples
1,1,1,2-Tetrachloroethane	ug/g	0.05	<0.04	All soil Samples
Chlorobenzene	ug/g	0.05	<0.05	All soil Samples
Ethylbenzene	ug/g	0.05	<0.05	All soil Samples
m & p-Xylene	ug/g		<0.05	All soil Samples
Bromoform	ug/g	0.05	<0.05	All soil Samples
Styrene	ug/g	0.05	<0.05	All soil Samples
1,1,2,2-Tetrachloroethane	ug/g	0.05	<0.05	All soil Samples
o-Xylene	ug/g		<0.05	All soil Samples
1,3-Dichlorobenzene	ug/g	0.05	<0.05	All soil Samples
1,4-Dichlorobenzene	ug/g	0.05	<0.05	All soil Samples
1,2-Dichlorobenzene	ug/g	0.05	<0.05	All soil Samples
Xylenes (Total)	ug/g	0.05	<0.05	All soil Samples
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	<0.05	All soil Samples
n-Hexane	µg/g	0.05	<0.05	All soil Samples
Toluene-d8	% Recovery		93	BH/MW-102 SS5
4-Bromofluorobenzene	% Recovery		85	BH-110 SS2
Moisture Content	%		46.3	BH-109 SS1

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Phase Two Environmental Site Assessment
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Ground water Sample Analytical Protocol

Sample Location	Sample ID	Date of Sampling	Chemical Analysis	Rationale
BH/MW-04	BH/MW-04	07/04/2024	M&I, PHC, BTEX, PAH, VOCs and PCBs	To assess water quality
BH/MW-102	BH/MW-102	07/04/2024	M&I, PHC, BTEX, PAH, VOCs and PCBs	To assess water quality
BH/MW-103	BH/MW-103	07/04/2024	M&I, PHC, BTEX, PAH, VOCs and PCBs	To assess water quality

Notes:

M&I = metals and inorganics
PHCs = petroleum hydrocarbons
VOCs = volatile organic compounds
PAHs = polycyclic aromatic hydrocarbons
BTEX = benzene, toluene, ethylbenzene and xylene
PCBs = Polychlorinated biphenyls

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Phase Two Environmental Site Assessment
159 Confederation Street, Town of Halton Hills, ON
Table 1: Ground Water Analytical Result - Metals and Inorganics

Sample Location				BH/MW-04	BH/MW-102	BH/MW-103
Sample ID				BH/MW-04	BH/MW-102	BH/MW-103
Sampling Date				07/04/2024	07/04/2024	07/04/2024
Laboratory ID				5983495	5983543	5983544
Parameter	Unit	MECP Table 9 RPIICC Standards	RDL			
Dissolved Antimony	µg/L	16000	1	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	1500	1	1	4	2.1
Dissolved Barium	µg/L	23000	2	138.0	113.0	65
Dissolved Beryllium	µg/L	53	0.5	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	36000	10	25.0	13.9	23.2
Dissolved Cadmium	µg/L	2.1	0.2	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	640	2	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	52	0.5	<0.50	5.35	<0.50
Dissolved Copper	µg/L	69	1	1.1	<1.0	1.2
Dissolved Lead	µg/L	20	0.5	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	7300	0.5	35.50	1.45	0.68
Dissolved Nickel	µg/L	390	1	<1.0	6.5	<1.0
Dissolved Selenium	µg/L	50	1	<1.0	<1.0	<1.0
Dissolved Silver	µg/L	1.2	0.2	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	400	0.3	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	330	0.5	0.95	0.92	<0.50
Dissolved Vanadium	µg/L	200	0.4	<0.40	<0.40	0.5
Dissolved Zinc	µg/L	890	5	<5.0	<5.0	<5.0
Mercury	µg/L	0.29	0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	110	2	<2.000	<2.000	<2.000
Cyanide, WAD	µg/L	52	2	<2	<2	<2
Dissolved Sodium	µg/L	1800000	50	9090	3280	38400
Chloride	µg/L	1800000	100	12900	1510	56400
Electrical Conductivity	uS/cm	NA	2	510	578	801
pH	pH Units		NA	7.98	7.86	7.61

MECP Table 9 RPI Standards = Ministry of Environment, Conservation and Parks (MECP) Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition - All Types of Property Use
RDL = Report Detection Limit

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159 Confederation Street, Town of Halton Hills, ON
Table 2: Ground Water Analytical Result - Semi-Volatiles Compounds

Sample Location				BH/MW-04	BH/MW-102	BH/MW-103
Sample ID				BH/MW-04	BH/MW-102	BH/MW-103
Sampling Date				07/04/2024	07/04/2024	07/04/2024
Laboratory ID				5983495	5983543	5983544
Parameter	Unit	MECP Table 9 RPIICC Standards	RDL			
Naphthalene	µg/L	1400	0.2	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1.4	0.2	<0.20	<0.20	<0.20
Acenaphthene	µg/L	600	0.2	<0.20	<0.20	<0.20
Fluorene	µg/L	290	0.2	<0.20	<0.20	<0.20
Phenanthrene	µg/L	380	0.1	<0.10	<0.10	<0.10
Anthracene	µg/L	1	0.1	<0.10	<0.10	<0.10
Fluoranthene	µg/L	73	0.2	<0.20	<0.20	<0.20
Pyrene	µg/L	5.7	0.2	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	1.8	0.2	<0.20	<0.20	<0.20
Chrysene	µg/L	0.7	0.1	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.1	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.1	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.2	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.4	0.2	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.2	<0.20	<0.20	<0.20
2-and 1-methyl Napthalene	µg/L	1500	0.2	<0.20	<0.20	<0.20
Naphthalene-d8	%		1	81	75	78
Acridine-d9	%		1	80	69	97
Terphenyl-d14	%		1	82	87	93
Sediment				2	2	2

MECP Table 9 RPI Standards = Ministry of Environment, Conservation and Parks (MECP) Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition - All Types of Property Use

RDL = Report Detection Limit

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Table 3: Ground Water Analytical Results -Petroleum Hydrocarbons (PHCs)

Sample Location				BH/MW-04	BH/MW-102	BH/MW-103
Sample ID				BH/MW-04	BH/MW-102	BH/MW-103
Sampling Date				07/04/2024	07/04/2024	07/04/2024
Laboratory ID				5983495	5983543	5983544
Parameter	Unit	MECP Table 9 RPIICC Standards	RDL			
F1 (C6 to C10)	µg/L		25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25
Toluene-d8	%		1	98	96	99
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100
F2 (C10 to C16) minus Naphthale	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
Terphenyl	% Recovery		1	77	70	89
Sediment				2	2	2

MECP Table 9 RPI Standards = Ministry of Environment, Conservation and Parks (MECP) Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition - All Types of Property Use

RDL = Report Detection Limit

Project No.: SP22-00727-01
Phase Two Environmental Site Assessment
12,22 and 24 Dayfoot Drive, Halton Hills, ON
Table 4: Ground Water Analytical Result - Volatile Organic Compounds

Sample Location				BH/MW-04	BH/MW-102	BH/MW-103
Sample ID				BH/MW-04	BH/MW-102	BH/MW-103
Sampling Date				07/04/2024	07/04/2024	07/04/2024
Laboratory ID				5983495	5983543	5983544
Parameter	Unit	MECP Table 9 RPIICC Standards	RDL			
Dichlorodifluoromethane	µg/L	3500	0.4	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	5.6	0.2	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.4	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	0.3	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	610	0.3	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.2	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	190	0.2	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	320	0.3	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	470000	1	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.2	<0.20	<0.20	<0.20
Chloroform	µg/L	2.4	0.2	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	0.2	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	640	0.3	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.2	<0.20	<0.20	<0.20
Benzene	µg/L	44	0.2	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	16	0.2	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	0.2	4.84	1.13	1.36
Bromodichloromethane	µg/L	67000	0.2	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	140000	1	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	0.2	<0.20	<0.20	<0.20
Toluene	µg/L	14000	0.2	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.1	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.25	0.1	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.2	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	3.3	0.1	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	500	0.1	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	1800	0.1	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.2	<0.20	<0.20	<0.20
Bromoform	µg/L	380	0.1	<0.10	<0.10	<0.10
Styrene	µg/L	1300	0.1	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	3.2	0.1	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.1	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.1	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	8	0.1	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	4600	0.1	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	5.2	0.3	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	3300	0.2	<0.20	<0.20	<0.20
n-Hexane	µg/L	51	0.2	<0.20	<0.20	<0.20
Toluene-d8	% Recovery		1	98	96	99
4-Bromofluorobenzene	% Recovery		1	90	94	93

MECP Table 9 RPI Standards = Ministry of Environment, Conservation and Parks (MECP) Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition - All Types of Property Use

RDL = Report Detection Limit

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Table 5: Ground Water Analytical Result - PCBs

Sample Location				BH/MW-04	BH/MW-102	BH/MW-103
Sample ID				BH/MW-04	BH/MW-102	BH/MW-103
Sampling Date				07/04/2024	07/04/2024	07/04/2024
Laboratory ID				5983495	5983543	5983544
Parameter	Unit	MECP Table 9 RPIICC Standards	RDL			
Polychlorinated Biphenyls	µg/L	0.2	0.1	<0.1	<0.1	<0.1
Decachlorobiphenyl	%		1	119	84	108

MECP Table 9 RPI Standards = Ministry of Environment, Conservation and Parks (MECP) Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Groundwater Condition - All Types of Property Use

RDL = Report Detection Limit

Ground Water Maximum Concentration Data

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159 Confederation Street, Town of Halton Hills, ON

Summary of Metals & Inorganics (M&I):

Parameter	Unit	MECP Table 9 RPIICC Standards	Maximum Concentration	Sample ID
Dissolved Antimony	µg/L	16000	<1.0	All Boreholes
Dissolved Arsenic	µg/L	1500	4	BH/MW-102
Dissolved Barium	µg/L	23000	138	BH/MW-04
Dissolved Beryllium	µg/L	53	<0.50	All Boreholes
Dissolved Boron	µg/L	36000	25	BH/MW-04
Dissolved Cadmium	µg/L	2.1	<0.20	All Boreholes
Dissolved Chromium	µg/L	640	<2.0	All Boreholes
Dissolved Cobalt	µg/L	52	5.35	BH/MW-102
Dissolved Copper	µg/L	69	1.2	BH/MW-103
Dissolved Lead	µg/L	20	<0.50	All Boreholes
Dissolved Molybdenum	µg/L	7300	35.50	BH/MW-04
Dissolved Nickel	µg/L	390	6.5	BH/MW-102
Dissolved Selenium	µg/L	50	<1.0	All Boreholes
Dissolved Silver	µg/L	1.2	<0.20	All Boreholes
Dissolved Thallium	µg/L	400	<0.30	All Boreholes
Dissolved Uranium	µg/L	330	0.95	BH/MW-04
Dissolved Vanadium	µg/L	200	0.5	BH/MW-103
Dissolved Zinc	µg/L	890	<5.0	All Boreholes
Mercury	µg/L	0.29	<0.02	All Boreholes
Chromium VI	µg/L	110	<2.000	All Boreholes
Cyanide, WAD	µg/L	52	<2	All Boreholes
Dissolved Sodium	µg/L	1800000	38400	BH/MW-103
Chloride	µg/L	1800000	56400	BH/MW-103
Electrical Conductivity	uS/cm	NA	801	BH/MW-103
pH	pH Units		7.98	BH/MW-04

Summary of Petroleum Hydrocarbons

Parameter	Unit	MECP Table 9 RPIICC Standards	Maximum Concentration	Sample ID
F1 (C6 to C10)	µg/L		<25	All Boreholes
F1 (C6 to C10) minus BTEX	µg/L	420	<25	All Boreholes
Toluene-d8	%		99	BH/MW-103
F2 (C10 to C16)	µg/L	150	<100	All Boreholes
F2 (C10 to C16) minus Naphthalene	µg/L		<100	All Boreholes
F3 (C16 to C34)	µg/L	500	<100	All Boreholes
F3 (C16 to C34) minus PAHs	µg/L		<100	All Boreholes
F4 (C34 to C50)	µg/L	500	<100	All Boreholes
Gravimetric Heavy Hydrocarbons	µg/L		NA	All Boreholes
Terphenyl	% Recovery		89	BH/MW-103
Sediment			2	All Boreholes

Summary of Semi Volatiles

Parameter	Unit	MECP Table 9 RPIICC Standards	Maximum Concentration	Sample ID
Naphthalene	µg/L	1400	<0.20	All Boreholes
Acenaphthylene	µg/L	1.4	<0.20	All Boreholes
Acenaphthene	µg/L	600	<0.20	All Boreholes
Fluorene	µg/L	290	<0.20	All Boreholes
Phenanthrene	µg/L	380	<0.10	All Boreholes
Anthracene	µg/L	1	<0.10	All Boreholes
Fluoranthene	µg/L	73	<0.20	All Boreholes
Pyrene	µg/L	5.7	<0.20	All Boreholes
Benzo(a)anthracene	µg/L	1.8	<0.20	All Boreholes
Chrysene	µg/L	0.7	<0.10	All Boreholes
Benzo(b)fluoranthene	µg/L	0.75	<0.10	All Boreholes
Benzo(k)fluoranthene	µg/L	0.4	<0.10	All Boreholes
Benzo(a)pyrene	µg/L	0.81	<0.01	All Boreholes
Indeno(1,2,3-cd)pyrene	µg/L	0.2	<0.20	All Boreholes
Dibenz(a,h)anthracene	µg/L	0.4	<0.20	All Boreholes
Benzo(g,h,i)perylene	µg/L	0.2	<0.20	All Boreholes
2-and 1-methyl Napthalene	µg/L	1500	<0.20	All Boreholes
Naphthalene-d8	%		81	BH/MW-04
Acridine-d9	%		97	BH/MW-103
Terphenyl-d14	%		93	BH/MW-103
Sediment			2	All Boreholes

Ground Water Maximum Concentration Data

Project No.: SP24-01265-00
Phase Two Environmental Site Assessment
159 Confederation Street, Town of Halton Hills, ON

Summary of Volatile Organic Compounds (VOCs) plus (BTEX):

Parameter	Unit	MECP Table 9 RPIICC Standards	Maximum Concentration	Sample ID
Dichlorodifluoromethane	µg/L	3500	<0.40	All Boreholes
Vinyl Chloride	µg/L	0.5	<0.17	All Boreholes
Bromomethane	µg/L	5.6	<0.20	All Boreholes
Trichlorofluoromethane	µg/L	2000	<0.40	All Boreholes
Acetone	µg/L	100000	<1.0	All Boreholes
1,1-Dichloroethylene	µg/L	1.6	<0.30	All Boreholes
Methylene Chloride	µg/L	610	<0.30	All Boreholes
trans- 1,2-Dichloroethylene	µg/L	1.6	<0.20	All Boreholes
Methyl tert-butyl ether	µg/L	190	<0.20	All Boreholes
1,1-Dichloroethane	µg/L	320	<0.30	All Boreholes
Methyl Ethyl Ketone	µg/L	470000	<1.0	All Boreholes
cis- 1,2-Dichloroethylene	µg/L	1.6	<0.20	All Boreholes
Chloroform	µg/L	2.4	<0.20	All Boreholes
1,2-Dichloroethane	µg/L	1.6	<0.20	All Boreholes
1,1,1-Trichloroethane	µg/L	640	<0.30	All Boreholes
Carbon Tetrachloride	µg/L	0.79	<0.20	All Boreholes
Benzene	µg/L	44	<0.20	All Boreholes
1,2-Dichloropropane	µg/L	16	<0.20	All Boreholes
Trichloroethylene	µg/L	1.6	1.45	BH/MW-04
Bromodichloromethane	µg/L	67000	<0.20	All Boreholes
Methyl Isobutyl Ketone	µg/L	140000	<1.0	All Boreholes
1,1,2-Trichloroethane	µg/L	4.7	<0.20	All Boreholes
Toluene	µg/L	14000	<0.20	MW_06
Dibromochloromethane	µg/L	65000	<0.10	All Boreholes
Ethylene Dibromide	µg/L	0.25	<0.10	All Boreholes
Tetrachloroethylene	µg/L	1.6	<0.20	All Boreholes
1,1,1,2-Tetrachloroethane	µg/L	3.3	<0.10	All Boreholes
Chlorobenzene	µg/L	500	<0.10	All Boreholes
Ethylbenzene	µg/L	1800	<0.10	All Boreholes
m & p-Xylene	µg/L		<0.20	MW_06
Bromoform	µg/L	380	<0.10	All Boreholes
Styrene	µg/L	1300	<0.10	All Boreholes
1,1,2,2-Tetrachloroethane	µg/L	3.2	<0.10	All Boreholes
o-Xylene	µg/L		<0.10	All Boreholes
1,3-Dichlorobenzene	µg/L	7600	<0.10	All Boreholes
1,4-Dichlorobenzene	µg/L	8	<0.10	All Boreholes
1,2-Dichlorobenzene	µg/L	4600	<0.10	All Boreholes
1,3-Dichloropropene	µg/L	5.2	<0.30	All Boreholes
Xylenes (Total)	µg/L	3300	<0.20	MW_06
n-Hexane	µg/L	51	<0.20	All Boreholes
Toluene-d8	% Recovery		99	BH/MW-103
4-Bromofluorobenzene	% Recovery		94	BH/MW-102

Summary of PCBs

Parameter	Unit	MECP Table 9 RPIICC Standards	Maximum Concentration	Sample ID
Polychlorinated Biphenyls	µg/L	0.2	<0.1	All Boreholes
Decachlorobiphenyl	%		119	BH/MW-04