

REPORT

Phase Two Environmental Site Assessment, 683 and 685 Warden Avenue, Toronto, Ontario

Part 2 of Contaminated Site Assessment

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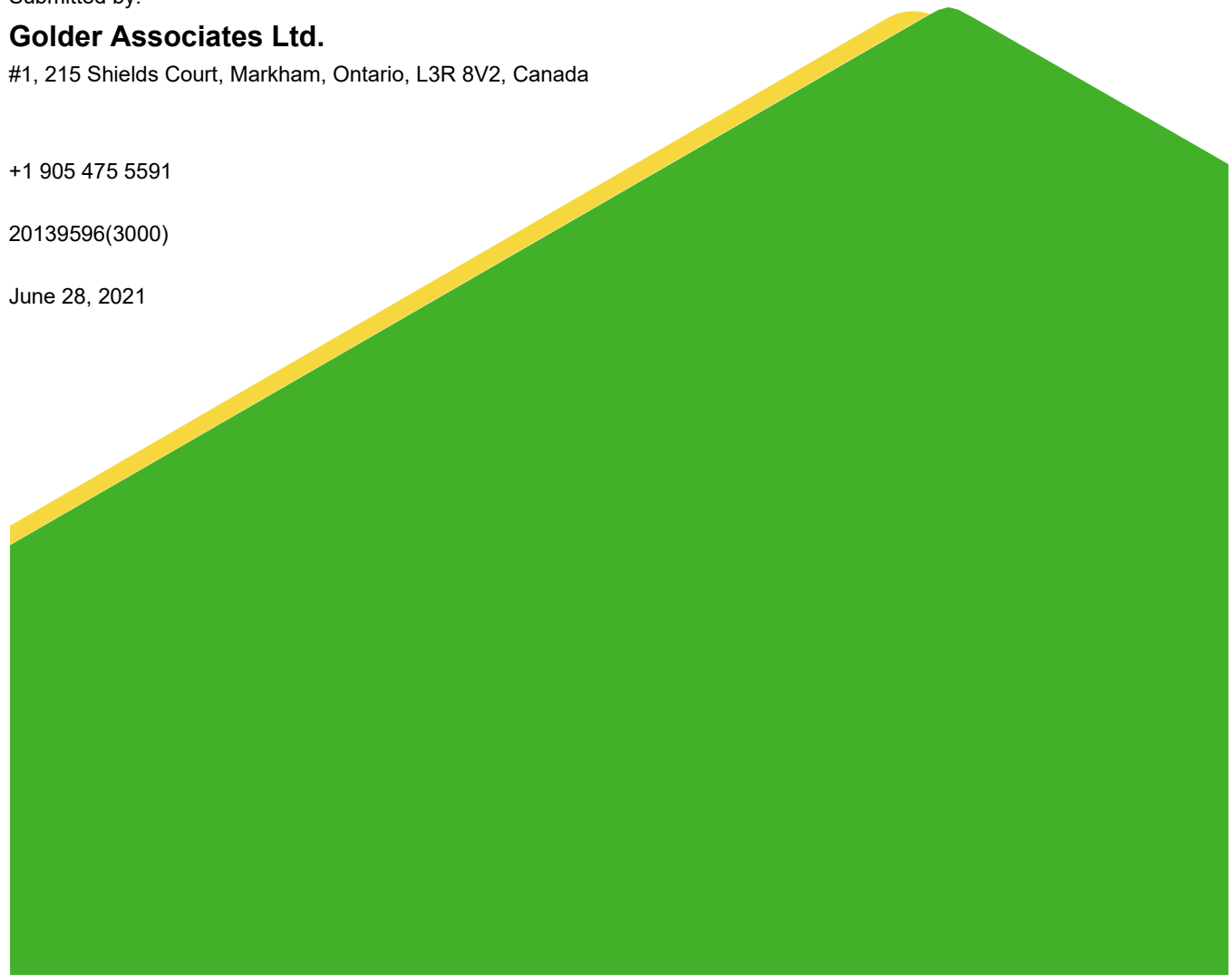
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Executive Summary

Golder Associates Ltd. (“Golder”) was retained by Choice Properties Limited Partnership (the “Client”) to undertake a Phase Two Environmental Site Assessment (“Phase Two ESA”) at 683-685 Warden Avenue, Toronto, Ontario (hereinafter referred to as the “Site” or the “Phase Two Property”), as shown on Figure 1.

Golder previously completed a Phase One ESA for the Site, the results of which were documented in the report titled “*Phase One Environmental Site Assessment, 683 and 685 Warden Avenue, Toronto, Ontario*”, dated April 20, 2020. Based on the findings of the Phase One ESA, Golder completed this Phase Two ESA investigation.

The analytical results from the sampling and analysis program indicated that all parameters tested in soil and groundwater, as defined by Ontario Regulation (“O. Reg.”) 153/04, at the Phase Two Property meet the applicable Ministry of Environment, Conservation and Parks (“MECP”) Table 3 Site condition standards.

Based on the above and in support of the filing of a Record of Site Condition (“RSC”), a Modified Generic Risk Assessment (“MGRA”) is not required.

It is noted that although all soil and groundwater samples collected during this Phase Two ESA satisfied the generic Table 3 site condition standards (“SCS”), historic environmental investigations indicate the potential presence of polycyclic aromatic hydrocarbon (“PAH”) impacts to shallow soil at unspecified locations across the Site. As such, it is recommended that shallow soil be stripped and tested for PAH as part of Site preparation for future redevelopment prior to removal from, or reuse on the Site.

Table of Contents

1.0 INTRODUCTION	1
1.1 Site Description	1
1.2 Property Ownership	1
1.3 Current and Proposed Future Uses	1
1.4 Applicable Site Condition Standards.....	2
2.0 BACKGROUND INFORMATION.....	2
2.1 Physical Setting.....	3
2.2 Past Investigations	3
2.2.1 Phase One ESA.....	3
2.2.2 Previous Environmental Investigations.....	6
3.0 SCOPE OF THE PHASE TWO ESA INVESTIGATION	6
3.1 Overview of Site Investigation.....	6
3.2 Media Investigated	7
3.3 Phase One Conceptual Site Model.....	7
3.4 Deviations from Sampling and Analysis Plan	9
3.5 Impediments.....	9
4.0 INVESTIGATION METHOD	9
4.1 General.....	9
4.2 Drilling	10
4.3 Soil: Sampling	10
4.4 Soil: Field Screening Measurements	10
4.5 Groundwater: Monitoring Well Installation	11
4.6 Groundwater: Field Measurements for Water Quality Parameters.....	11
4.7 Groundwater: Development, Purging and Sampling	11
4.8 Sediment: Sampling	12
4.9 Analytical Testing	12

4.10	Residue Management Procedures	12
4.11	Elevation Surveying	12
4.12	Quality Assurance and Quality Control Measures	12
5.0	REVIEW AND EVALUATION	13
5.1	Geology	14
5.2	Groundwater: Elevations and Flow Direction	14
5.3	Groundwater: Hydraulic Gradients	15
5.4	Soil: Texture	15
5.5	Soil: Field Screening	15
5.6	Soil: Quality	15
5.7	Groundwater: Quality	16
5.8	Sediment Quality	16
5.9	Quality Assurance and Quality Control Results	16
5.10	Phase Two Conceptual Site Model	17
5.10.1	Phase One ESA Information	17
5.10.2	Potentially Contaminating Activities	17
5.10.3	Areas of Potential Environmental Concern	21
5.10.4	Subsurface Structures and Utilities	26
5.10.5	Physical Setting	27
5.10.5.1	Topography	27
5.10.5.2	Stratigraphy	27
5.10.5.3	Hydrogeological Characteristics	27
5.10.6	Applicable Standards	28
5.10.7	Contaminated Media	28
5.10.8	Contaminants Exceeding Applicable Standards at the Site	28
5.10.9	Description of Areas of Contamination on the Property	29
5.10.10	Potential Influence of Utilities on Contaminant Migration	29
5.10.11	Description of Contaminants	29
5.10.12	Migration of Contaminants	29

5.10.13	Meteorological and Climatic Considerations.....	29
5.10.14	Potential for Soil Vapour Intrusion	29
6.0	CONCLUSIONS.....	29
7.0	REFERENCES.....	30
8.0	LIMITATIONS.....	30
9.0	CLOSURE.....	31

TABLES

Table 1: Monitoring Well Construction Details

Table 2: Groundwater Elevations

Table 3: Summary of Soil Samples Submitted for Laboratory Analysis

Table 4: Summary of Groundwater Samples Submitted for Laboratory Analysis

Table 5A: Summary of Soil Analytical Results – Metals, Hydride Metals and ORP

Table 5B: Summary of Soil Analytical Results – Polycyclic Aromatic Hydrocarbons

Table 5C: Summary of Soil Analytical Results – Petroleum Hydrocarbons

Table 5D: Summary of Soil Analytical Results – Volatile Organic Compounds

Table 5E: Summary of Soil Analytical Results – Biphenyls Polychlorinated

Table 6A: Summary of Groundwater Analytical Results – Metals, Hydride Metals and ORP

Table 6B: Summary of Groundwater Analytical Results – Polycyclic Aromatic Hydrocarbons

Table 6C: Summary of Groundwater Analytical Results – Petroleum Hydrocarbons

Table 6D: Summary of Groundwater Analytical Results – Volatile Organic Compounds

Table 6E: Summary of Groundwater Analytical Results – Biphenyls Polychlorinated

FIGURES

Figure 1: Key Plan

Figure 2: Potentially Contaminating Activities

Figure 3: Areas of Potential Environmental Concern

Figure 4: Phase Two Property Plan

Figure 5A: Cross Section A-A'

Figure 5B: Cross Section B-B'

Figure 6: Groundwater Elevations – March 26, 2020

APPENDICES

APPENDIX A

Legal Plan of Survey

APPENDIX B

Laboratory Certificates of Analysis

APPENDIX C

Correspondence with the Municipality Regarding Use of Non-Potable Standards

APPENDIX D

Sampling and Analysis Plan

APPENDIX E

Record of Borehole Sheets

1.0 INTRODUCTION

1.1 Site Description

Golder was retained by Choice Properties Limited Partnership to conduct a Phase Two ESA of the following property:

Municipal Address	683 and 685 Warden Avenue, Toronto, Ontario
Property Identification Number	06449-0174 (LT), 06449-0173 (LT), 06449-0270 (LT)
Legal Description	Part of Lot 32, Concession B, City of Toronto; designated as Parts 1-25 on Reference Plan 66R-24263.
Size of the Phase Two Property	6.52 acres

The location of the Phase Two Property is provided in Figure 1. The above referenced Plan of Survey are provided in Appendix A. The boundaries of the Phase Two Property as provided by the client, which are the same as the RSC property boundaries, is shown in Figure 2.

The Site (shown in Figure 2) consists of approximately 2.63 hectares (6.52 acres) of land. At the time of the field investigation, which was initiated in March 2020, the Site was an empty land parcel partially covered with gravel areas on the south and grassed areas on the central and north portions. The Site building and associated parking area was demolished in 2009.

1.2 Property Ownership

Authorization to proceed with this investigation was received from Mr. Farid Malek of Choice Properties REIT on January 24, 2020. The contact information for the Client and the Phase One Property owner is:

Site Owner / Client	Address	Contact Name
Choice Properties REIT	175 Bloor Street East North Tower, Suite 1400 Toronto, Ontario M4W 3R8	Mr. Farid Malek Telephone: 416-324-7913

1.3 Current and Proposed Future Uses

The Site is currently undeveloped with soil and vegetated areas on the northern and central portion of the Site, and gravel areas on the southern area of the Site. The proposed future use of the Phase Two Property is a residential development. Given the former use of the Site and the proposed land use change, it is understood that a Record of Site condition is required for the Site, as per O. Reg. 153/04. The future land use is considered residential under O.Reg. 153/04.

1.4 Applicable Site Condition Standards

The analytical results of soil and groundwater samples collected for this Phase Two ESA were compared to the Table 3 generic Site conditions standards (residential/parkland/institutional property use, medium to fine soil texture) presented in the Ontario Ministry of the Environment (MOE¹) document titled “*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, April 15, 2011*”. The applicable Site condition standards were selected based on the following rationale:

- The Phase Two Property is not located in an area designated in a municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of ground water;
- No water bodies were identified on the Phase Two Property;
- The proposed future use of the Site is residential;
- Based on field observations and grain size analysis results (refer to Appendix B) from soil samples collected from boreholes, the soil present at the Site is estimated to consist of soil having a grain size distribution with 50 percent or more by mass of particles that are smaller than 75 µm mesh. Under the definition presented in O. Reg. 153/04, the soil at the Site is therefore considered to be medium and fine textured;
- The Site and surrounding properties located in whole or in part within 250 metres of the Site are within an area that is municipally serviced by a water supply that does not rely on potable groundwater as its source;
- The closest water body is Massey Creek, which is located approximately 180 m west of the Site;
- There are no features on the Phase Two Property that would meet the conditions of an environmentally sensitive Site, as described in Section 41;
- The pH of soil at the Site is greater than 5 and less than 9;
- The overburden thickness is greater than 2 metres over more than one-third of the Phase Two Property; and
- The average depth to groundwater at the Site is 5.27 mbgs.

Based on the above, the MECP 2011 Table 3 Standards, which includes quality standards for soil and groundwater, were used to assess the environmental conditions at the Site.

2.0 BACKGROUND INFORMATION

This section presents the background conditions of the Phase Two Property including a description of the physical setting and a summary of past investigations conducted.

The objectives of the Phase Two ESA were to obtain information about environmental conditions in the soil and groundwater on, in or under the Site, and to develop the information necessary to complete a Record of Site Condition (“RSC”) for the property. The objectives of this Phase Two ESA were achieved by:

- Developing an understanding of the geological and hydrogeological conditions at the Site; and

¹ MOE was renamed the MECP; however, the generic site condition standards and associate guidance documents were released by the MOE and the standards are still legally referred to as the MOE standards.

- Conducting field sampling for all contaminants of concern (“COCs”) associated with each area of potential environmental concern (“APEC”) identified in the Phase One ESA.

2.1 Physical Setting

The site consists of a rectangular parcel of land with a strip of land on the northeast corner of the property that goes behind the neighbouring property to the north. The Site is located on the east side of the Warden Avenue, in Toronto. The nearest water body is Massey Creek which is located approximately 180 m west of the Site, which flows south and then west to Don River East Branch (4.4 Km west). Land uses surrounding the Site are community, residential, commercial and industrial.

The topography of the central to northern portion of the Site was generally higher than the southern portion of the Site and surrounding areas. Generally, a gentle slope to the south is present. There are no surface water drainage feature on the Phase Two ESA Site.

2.2 Past Investigations

2.2.1 Phase One ESA

Golder conducted a Phase One ESA entitled, “*Phase One Environmental Site Assessment, 683 and 685 Warden Avenue, Toronto, Ontario*”, dated April, 2020, to assess the likelihood of soil and/or groundwater contamination resulting from historic or present activities at the Site and surrounding area. This included a review of available historical information on the Site and surrounding area, interviews with persons familiar with the Site and a Site reconnaissance. The location of Potentially Contaminating Activities identified via the Phase One ESA are shown on Figure 2. The location of APECs identified based on the Phase One ESA are shown on Figure 3 and summarized below:

PCA #	Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³
1	APEC A1 - Fill was reported to be present at the Site up to a maximum depth of 5.5 m below grade. In addition, stockpiles of material are noted at ground surface.	Across the Site	#30. Importation of Fill Material of Unknown Quality	On-Site	PHC, PAH, metals, hydride metals and ORP
2	APEC A2 - Previously identified soil exceedance of anthracene (the exact location of this exceedance is unknown).	Site wide	Other	On-Site	PAH
3	APEC A3 - Previously identified soil exceedance of benzo(a)pyrene (the exact location of this exceedance is unknown).	Site wide	Other	On-Site	PAH

PCA #	Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³
4	APEC B1 - The Site was historically operated as an industrial facility for the manufacturing of metal sash windows between 1955 and the early 1970s.	Former building area	#34. Metal Fabrication	On-Site	PHC, PAH, VOC, metals, hydride metals and ORP
5	APEC B2 - The former industrial activities included painting activities and storage. This included spray painting and powder paint applications.	Former building area	#39. Paints Manufacturing, Processing and Bulk Storage	On-Site	VOC
6	APEC B3 - The Site was historically operated as a glass manufacturing facility between the late 1970s and the 1980s.	Former building area	#29. Glass Manufacturing	On-Site	VOC, metals, hydride metals and ORP
7	APEC B4 - The Site was historically operated as a mattress manufacturing facility between the 1990s and 2009.	Former building area	#54. Textile Manufacturing and Processing	On-Site	PHC, BTEX, VOC
8	APEC B5 - The Site was historically operated as a transformer manufacturing facility during the 1970s.	Former building area	#55. Transformer Manufacturing, Process and Use	On-Site	PHC, PCB
9	APEC B6 - An oil-water interceptor was historically located within the former industrial building.	Former building area	Other	On-Site	PHC, BTEX, VOC
10	APEC B7 - A concrete box filled with impacted soil was previously identified within the former building.	Former building area	Other	On-Site	PHC, PAH, VOC
11	APEC C1 - Two transformers were previously located in the northwest portion of the Site (northwest of the former building).	Area north of the western portion of former building.	#55. Transformer Manufacturing, Process and Use	On-Site	PCB

PCA #	Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³
12	APEC D1 - A fuel oil UST was previously located northwest of the former building. In addition, groundwater exceedances of PHC F3 and F4 were previously identified in the vicinity of the former UST.	Area north of the western portion of former building.	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH
13	APEC E1 - A railway spur was previously located north of the building, entering from the east. The spur was removed at some point between 1975 and 1985.	Northern and eastern portions of the Site.	#46. Rail Yards, Tracks and Spurs	On-Site	PHC, PAH, metals, hydride metals and ORP
14	APEC F1 - An engine derailment, resulting in a release of 500 L of diesel fuel to the ground was reported at 689 Warden Avenue (immediately north) in 1991. It is inferred that this property had a diesel tank.	Northern boundary of the Site	#28. Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	PHC, BTEX
15	APEC F2 - Various industrial activities were reported at the facility located at 689 Warden Avenue (immediately north). This included the generation of various hazardous wastes.	Northern boundary of the Site	Other	Off-Site	PHC, PAH, BTEX, VOC, metals, hydride metals and ORP
16	APEC F3 - A facility called Toronto Winsun Laundry was previously located at 689 Warden Avenue (immediately north), and reported a release of "blowdown water". It is unknown if any dry cleaning operations took place at this location.	Northern boundary of the Site	#37. Operation of Dry Cleaning Equipment (where chemicals are used)	Off-Site	VOC

Notes:

- 1 Area of potential environmental concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental Site assessment, including through, •(a) identification of past or present uses on, in or under the phase one property, and •(b) identification of potentially contaminating activity
- 2 Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area
- 3 Contaminants of potential concern specified using the method groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011
- 4 Metals – Antimony (As), Arsenic (As), Ba (Barium), Beryllium (Be), Boron (B), Cadmium (Cd), Chromium (Cr), Cobalt (Co), Copper (Cu), Lead (Pb), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Silver (Ag), Thallium (Th), Uranium (U), Vanadium (V), Zinc (Zn); ORP – Hexavalent Chromium (Cr-VI), Sodium (Na), Mercury (Hg), Hot Water Soluble Boron (B-HWS), Chloride (Cl-), Cyanide (CN-), Sodium Adsorption Ratio (SAR), Electrical Conductivity (EC); PHC – Petroleum Hydrocarbons; BTEX – Benzene, Toluene, Ethylbenzene and Xylenes; VOC – Volatile Organic Compounds; PAH – Polycyclic Aromatic Hydrocarbons.

2.2.2 Previous Environmental Investigations

Several previous environmental investigations have been carried out at the Site and are summarized in the Phase One ESA report, as referenced above. The findings of these previous investigations were considered as part of the Phase One ESA. None of the analytical data from these previous investigations has been incorporated into this Phase Two ESA.

3.0 SCOPE OF THE PHASE TWO ESA INVESTIGATION

The objective of this Phase Two ESA was to assess the presence or absence of impact associated with the APECs as identified in the Phase One ESA, to assess the vertical extent of soil and groundwater contaminants identified at the Site, and to support the filing of a RSC for the Site.

3.1 Overview of Site Investigation

The Phase Two ESA was carried out in March 2020 and included the following tasks:

- **Health and Safety Plan:** A Health and Safety Plan for internal and subcontractor use was prepared prior to initiating fieldwork at the Site in 2020.
- **Subsurface utilities in the areas of investigation:** Prior to drilling, Golder contacted local public utilities and retained the services of a private contractor to locate and identify potential buried services within the general areas of the proposed test locations before commencing intrusive investigations at the Site.
- **Sampling and analysis plan:** Golder prepared a sampling and analysis plan prior to conducting the filed investigation (refer to Appendix C).
- **Borehole drilling and monitoring well installation:** The borehole drilling program was conducted between March 9 and 12, 2020 and included drilling of seven boreholes, of which, six were completed as groundwater monitoring wells. The location of the boreholes and monitoring wells are provided in Figure 4. The monitoring well construction details are presented in Table 1.
- **Soil sampling:** Selected soil samples were collected between March 9 and 12, 2020 from the boreholes. Soil samples were submitted for chemical analysis of one or more of the following: petroleum hydrocarbons ("PHCs") plus benzene, toluene, ethylbenzene and xylenes ("BTEX"), volatile organic compounds ("VOCs"), polycyclic aromatic hydrocarbons ("PAHs"), polychlorinated biphenyls ("PCBs"), metals and inorganics.
- **Well development, groundwater monitoring and sampling:** Golder collected groundwater samples on March 26, 2020 from six newly installed monitoring wells (BH20-1 to BH20-6). The groundwater samples were submitted for one or more of VOCs, PHCs, BTEX, PAHs, PCBs, metals and inorganics. A summary of the groundwater samples submitted for analysis is presented in Table 3.
- **Surveying:** An elevation survey for the boreholes and monitoring wells used in conjunction with this Phase Two ESA was completed by Golder on March 27, 2020.
- **Reporting:** Golder compiled and assessed the field and laboratory results from the above noted activities into this report.

The Phase Two ESA investigation was carried out in general accordance with Golder's standard operating procedures which conform to the requirements of O. Reg. 153/04. The Sampling and Analysis Plan for this Phase Two ESA is provided in Appendix C. The data from this Phase Two ESA investigation completed by Golder at the

Sites were incorporated into a single Phase Two ESA report following the Phase Two ESA report format and content required by O. Reg. 153/04.

There were no impediments or access limitations that would affect the conclusions of the Phase Two ESA report.

3.2 Media Investigated

To address the potential environmental issues identified in the Phase One ESA, the Phase Two ESA field program included sampling of soil from boreholes, and groundwater from monitoring wells screened within overburden at the Site. No sediment was present at the Site and therefore no sediment sampling was completed. Details of the parameters analysed in soil and groundwater samples are presented in Tables 3 and 4. The sampling and analysis plan (refer to Appendix C) outlines the rationale for the field investigation activities carried out at the Site and the associated methodologies used to meet the objectives of this Phase Two ESA.

3.3 Phase One Conceptual Site Model

The following key Site features (as required by O.Reg. 153/04) are presented in Figures 1, 2, and 3:

- Existing buildings and structures;
- Water bodies and areas of natural significance located in the Phase One Study Area;
- Drinking water wells on the Phase One Property;
- Roads (including names) within the Phase One Study Area;
- Uses of properties adjacent to the Phase One Property; and,
- Location of identified PCAs in the Phase One Study Area (including any storage tanks).

The following describes the Phase One ESA CSM based on the information obtained and reviewed as part of this Phase One ESA:

- The Phase One Property consisted of a 2.6 hectare parcel of undeveloped land. No buildings or structures were noted on the Phase One Property. The surrounding properties within the Phase One Study Area included residential, commercial, industrial and parkland land uses;
- No water bodies or areas of natural significance were identified on or within 30 m of the Phase One Property;
- Potable water in the vicinity of the Phase One Property is provided by the City of Toronto and is obtained from Lake Ontario. No potable water wells were identified on the Phase One Property or within the Phase One Study Area;
- Historically, the Phase One Property was previously used for agricultural purposes since prior to 1947 and was later developed with an industrial building in 1955, with an addition constructed in 1966. The Site historically operated as an industrial facility for the manufacturing of metal sash windows between 1955 and the early 1970s, manufacturing of transformer during the 1970s, glass manufacturing between the late 1970s and the 1980s; and for the manufacturing of mattresses between the 1990s and 2009. The building was demolished in 2009 and the Site has remained undeveloped since this time. Following demolition, a portion of the Site was previously used for the storage of construction materials and construction office trailers;

- The following relevant PCAs and contaminants of concern were identified on the Phase One Property or in the Phase One Study Area:
 - #30 Importation of Fill Material of Unknown Quality – Fill was reported to be present at the Site, consisting of a mixture of sandy silt or clayey silt with sand and gravel, topsoil and occasionally wooden ties, brick and asphalt pieces up to a maximum depth of 5.5 mbgs. In addition, in February 2020, surficial fill and stockpiled materials were observed. During the current Phase One ESA site visit, stockpiled materials were observed on the eastern central portion of the Site.;
 - #34. Metal Fabrication – The Site was historically operated as an industrial facility for the manufacturing of metal sash windows between 1955 and the early 1970s;
 - #55. Transformer Manufacturing, Process and Use – Two transformers were previously located in the northwest portion of the Site (northwest of the former building);
 - #28. Gasoline and Associated Products Storage in Fixed Tanks – A fuel oil UST was previously located northwest of the former on-Site building. Previously identified groundwater exceedances of PHC F3 and F4 in the vicinity of the former UST;
 - #46. Rail Yards, Tracks and Spurs – A railway spur was previously located north of the on-Site building, entering from the eastern portion of the Site. The spur was removed at some point between 1975 and 1985;
 - #39. Paints Manufacturing, Processing and Bulk Storage – The former on-Site industrial activities included painting activities and storage. This included spray painting and powder paint applications;
 - #55. Transformer Manufacturing, Process and Use – The Site was historically operated as a transformer manufacturing facility during the 1970s;
 - #29. Glass Manufacturing – The Site was historically operated as a glass manufacturing facility between the late 1970s and the 1980s;
 - #54. Textile Manufacturing and Processing – The Site was historically operated as a mattress manufacturing facility between the 1990s and 2009;
 - Other – An oil-water interceptor was historically located within the former on-Site industrial building;
 - Other – A concrete box filled with impacted soil was previously identified within the former on-Site building;
 - Other – Previously identified soil exceedance of anthracene on the Site (the exact location of this exceedance is unknown);
 - Other – Previously identified soil exceedance of benzo(a)pyrene on the Site (the exact location of this exceedance is unknown);
 - #28. Gasoline and Associated Products Storage in Fixed Tanks – An engine derailment, resulting in a release of 500 L of diesel fuel to the ground was reported at 689 Warden Avenue (immediately north) in 1991. It is inferred that this property had a diesel tank;

- Other – Various industrial activities were reported at the facility located at 689 Warden Avenue (immediately north). This included the generation of various hazardous wastes; and,
- #37. Operation of Dry Cleaning Equipment (where chemicals are used) – A facility called Toronto Winsun Laundry was previously located at 689 Warden Avenue (immediately north), and reported a release of “blowdown water”. It is unknown if any dry cleaning operations took place at this location.
- Underground utility drawings for the Site were not available and may be present based on the previous development of the Site;
- Based on previous subsurface investigations completed at the Site, stratigraphy was described as fill, generally consisting of a mixture of sandy silt or clayey silt with sand and gravel, topsoil and occasionally wooden ties, brick and asphalt pieces up to a maximum depth of 5.5 m below grade, overlying native till including sandy silt till deposit, clayey silt till, and sand/sandy till up to a maximum depth of approximately 6.6 m below grade;
- Bedrock in the vicinity of the Site is anticipated to include shale, limestone, dolostone and/or siltstone. Depth to bedrock is anticipated to be 76.2 m below grade;
- Regional groundwater flow in the underlying aquifers is typically to the southeast toward Lake Ontario located 2.2 km southeast of the Site. Local groundwater flow may be influenced by Taylor Creek, which is located 180 m west of the Site. Based on the Site topography, the inferred direction of shallow groundwater flow is to the southwest; and,
- Based on previous subsurface investigations completed at the Site, groundwater was identified at depths ranging from 0.5 to 3.8 m below grade.

3.4 Deviations from Sampling and Analysis Plan

The soil and groundwater sampling were carried out in general accordance with the Phase Two ESA work program documented in the sampling and analysis plans (Appendix C).

3.5 Impediments

No physical impediments to the Phase Two ESA investigation were encountered. Access to the Phase Two Property was not denied or restricted.

4.0 INVESTIGATION METHOD

4.1 General

The following sections describe the field investigation methods employed during the Phase Two ESA. The fieldwork was carried out in March 2020.

Prior to the commencement of field activities, Golder developed a Site-specific health and safety plan. The plan identified potential health and safety concerns anticipated for the work to be done at the Site, prescribed work procedures to mitigate these concerns, specified personal protective equipment requirements for Site work and established procedures to be followed by Golder staff in the event of an emergency. The document was reviewed and signed on-Site by field personnel prior to commencing work. Additionally, prior to the commencement of intrusive investigations, Golder contacted public underground utilities locators to co-ordinate clearances of

potential underground services (e.g., telephone, sewers, water lines, and gas lines). Golder also retained the services of a private local underground utilities' locator, to scan the general investigation areas.

4.2 Drilling

A total of seven boreholes were drilled by Landshark Drilling Inc. ("Landshark") for the purpose of soil and lithology description, soil sampling, installation of monitoring wells and groundwater sampling. Six of the seven boreholes were equipped as monitoring wells. The borehole and monitoring well locations are shown on Figure 4. The Record of Borehole Logs are provided in Appendix D.

Borehole drilling and monitoring well installation were undertaken between March 9 to 12, 2020 using a GtechDrill G8 multifunctional track mounted mud rotary drill rig, equipped with hollow stem augers and split spoon samplers for soil sampling and monitoring well installation.

During drilling, split spoons were cleaned and decontaminated between each soil sampling interval by washing with an Alconox detergent solution and rinsing with potable water to reduce the potential for cross contamination between soil sampling intervals.

4.3 Soil: Sampling

Soil samples were retrieved from the boreholes using a split-spoon sampler at 0.76 m intervals until 3.04 m below ground surface ("bgs") and after that, every 1.52 m until final depth. The retrieved samples were split in the field into two components. One component of each sample was placed into labelled laboratory-supplied glass jars (hermetic sampling devices or in-field methanol preserved glass vials for volatile parameters) and stored in a cooler with ice for possible subsequent chemical analyses. The second component of the sample was placed inside a labelled plastic bag for subsequent field testing and screening using soil headspace vapour measurements.

Soil samples were stored on ice in a cooler until delivered to the laboratory for analysis under chain of custody. Selection of soil samples for laboratory analysis was based on the APEC being investigated, results of the headspace screening and conditions encountered at each test location including visual (e.g., staining, discolouration) and olfactory observations (if any). A summary of the soil samples submitted for analysis is provided in Table 3.

Geologic descriptions, visual and olfactory observations and results of the field headspace screening are presented on the Record of Borehole Sheets in Appendix D.

4.4 Soil: Field Screening Measurements

Soil headspace vapour measurements were conducted on the soil samples collected for combustible gas and organic vapour concentrations using the equipment described in the following table.

Equipment	Make and Model	Parameters Detected	Detection Limits	Precision	Accuracy	Calibration Standard	Calibration Procedure
Photo-ionization Detector	RKI Eagle 2	Organic vapour	0 – 2,000 parts per million (ppm)	± 1 ppm	Varies by specific VOC.	Isobutylene	In the warehouse prior to fieldwork
Combustible gas meter		Combustible gas	0 – 11,000 parts per million (ppm)	0-200: ±5 ppm 200–1,000: ± 10 ppm 1000–11000: ± 50 ppm	± 50 ppm or ± 10% of reading	Hexane	In the warehouse prior to fieldwork

The results of soil headspace measurements are presented on the Record of Borehole Sheets included in Appendix D.

4.5 Groundwater: Monitoring Well Installation

Golder personnel supervised the completion of a total of seven borehole locations, six of which were equipped with monitoring wells (i.e., BH20-1 to BH20-6). The monitoring wells were constructed using threaded 51-mm (2 inch) ID Schedule 40, PVC well screens and riser pipe. The annulus of the borehole around the monitoring well screens was backfilled with commercially supplied silica sand to a level of approximately 30 cm above the screen. The remainder of the annulus was sealed with hole-plug and bentonite grout to a depth of approximately 30 cm bgs and concrete to ground surface to minimize the potential for infiltration of surface water or shallower groundwater into the screened interval.

Each monitoring well was completed with a monument protective casing set in concrete and sealed with a PVC J-plug. Well construction details are provided on the respective Record of Borehole sheets provided in Appendix D. The monitoring well locations are shown on Figure 4.

4.6 Groundwater: Field Measurements for Water Quality Parameters

Groundwater indicator parameters, including temperature, pH, conductivity, were measured prior to sampling to ensure adequate well development and purging. Hanna multi-parameter meter was used to measure groundwater quality during monitoring well development and groundwater sampling. The instruments were calibrated by the supplier and/or using factory supplied solutions for electrical conductivity (1413 micro Siemens per centimetre ($\mu\text{S}/\text{cm}$)) and pH (4.01 pH and 7.01 pH) parameters. Specifications for the water quality metre are summarized in the following table:

Parameter	Measurement Range	Precision	Accuracy
pH	0.00 to 14.00 pH	0.01 pH	± 0.2 pH
Conductivity	0.00 to 3999 $\mu\text{S}/\text{cm}$	0.01 mS/cm	$\pm 0.5\%$
Temperature	-5 to 45 $^{\circ}\text{C}$	0.1 $^{\circ}\text{C}$	± 0.15 $^{\circ}\text{C}$

4.7 Groundwater: Development, Purging and Sampling

Golder measured groundwater levels in monitoring wells on March 23, 2020. Groundwater monitoring details are summarized in Table 2. Golder did not observe any evidence of free non-aqueous liquids in the monitoring.

Prior to groundwater monitoring and sampling, development of each monitoring well at the Site was conducted by Golder personnel to remove fine-grained material and stabilize the sand filter pack. Development was completed by using dedicated Waterra® tubing equipped with a surge block and a foot valve to pump groundwater. Purge water was collected into plastic pales and left on-Site for disposal by the Client.

During the groundwater monitoring well development events, groundwater quality parameters were measured throughout the process of development. Measurements were recorded for temperature, pH, electrical conductivity ("EC"), using a Hanna multi-parameter meter, as noted above.

Groundwater samples were collected from the six newly installed monitoring wells on March 26, 2020. Depth to water was determined using an electric water level meter. Prior to groundwater sampling, each monitoring well was purged using dedicated Waterra® tubing equipped with a footvalve pump to remove standing groundwater. Monitoring wells were considered as low yield, since most of them could not produce enough water for purging and sampling. Purging was completed upon removal a total volume of approximately half of the standing water

volume in the well. Field measurements of water quality parameters including temperature, pH and EC were recorded from the produced groundwater.

Groundwater sampling was conducted according to Golder Standard Operational Procedures ("SOP"). The portions of the samples to be analyzed for dissolved metals were field filtered at the time of collection using a 0.45 µm high capacity inline filter. Groundwater sampling was completed by collecting groundwater samples into pre-cleaned laboratory-supplied sample containers and stored in a cooler until delivered to the analytical laboratory under chain of custody. A summary of the groundwater samples submitted for analysis is provided in Table 4.

4.8 Sediment: Sampling

Sediment was not present at the Site, therefore no sediment samples were collected as part of this investigation.

4.9 Analytical Testing

The contact information for the analytical laboratory is included below.

AGAT Laboratories
5835 Coopers Ave
Mississauga, Ontario, L5N 2L8
Laboratory Contact: Vishwas Pandya
905.712.5126

The analytical laboratory is accredited in accordance with the International Standard ISO/IEC 17025 (CALA) (General Requirement for the Competence of Testing and Calibration Laboratories, May 5, 2005, as amended) and the standards for proficiency testing developed by the Standards Council of Canada, the Canadian Association for Laboratory Accreditation or another accreditation body accepted by the MECP.

4.10 Residue Management Procedures

Soil cuttings generated from the borehole drilling was deemed clean according to the headspace measurements and placed on the ground. Wastewater generated during well development and groundwater monitoring was contained in labelled drums/pales and left on-Site. The data from this investigation can be used to arrange for disposal of the wastes.

4.11 Elevation Surveying

Elevations were determined relative to a remaining Catch-basin ("CB") located east of old building footprint, in the central east portion of the site (Published Elevation = 145.62 metres above sea level ("masl") obtained from the attached "Plan of Survey with photography of Part of Lot 32 Concession B, City of Toronto (Formerly City of Scarborough) and the following permanent and recoverable benchmark:

- City of Toronto Benchmark No. MT 71, having a reported elevation of 147.557 masl.

4.12 Quality Assurance and Quality Control Measures

Golder's quality assurance program for environmental investigations was implemented to ensure that analytical data obtained by the investigation were valid and representative. The quality assurance program included the following measures:

- The use of standard operating procedures for all field investigation activities;

- All monitoring wells were developed following installation to remove fine particles from the filter pack and any fluids introduced during drilling;
- Monitoring wells were appropriately purged prior to groundwater sample collection to remove stagnant water from the well bore and improve sample representativeness, minimizing sample agitation and aeration to the extent practicable;
- The collection of field duplicate samples at a minimum frequency of one duplicate for every ten samples;
- The analysis of a field and trip blank associated with the March 2020 groundwater sampling event;
- Initial calibration of field equipment was performed at the start of each field day, with daily checks of calibration, as needed, using a standard of known concentration;
- Soil and groundwater samples were handled and stored in accordance with the sample collection and preservation requirement of the Ministry of the Environment (MOE) *Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.1 of the Environmental Protection Act*, July 1, 2011. Samples were collected directly into pre-cleaned, laboratory-supplied sample containers with the appropriate preservative for the analyte group. Upon collection, samples were placed in insulated coolers with ice for storage and transport to the analytical laboratory under chain-of-custody;
- Dedicated sampling equipment (tubing and footvalves) and clean disposable Nitrile™ gloves were used at each sampling location to prevent cross-contamination. All non-dedicated sampling equipment (e.g., water level meters, split spoons) was decontaminated between sampling locations. Sampling equipment in contact with soil, groundwater, or sediment was: cleaned by mechanical means; washed with a phosphate-free, laboratory-grade detergent (e.g., LiquiNox) and, if necessary, an appropriate desorbing wash solution; and thoroughly rinsed with analyte-free water;
- Detailed field records documenting the methods and circumstances of collection for each field sample were prepared at the time of sample collection. Each sample was assigned a unique sample identification number recorded in the field notes, along with the date and time of sample collection, the sample matrix, and the requested analyses; and
- The submission of samples to the analytical laboratory in accordance with standard chain of custody procedures.

Below is a summary of the primary and duplicate samples collected in March, 2020:

Date	Soil Samples ID	Duplicate ID	Trip Blanks
March 9, 2020	BH20-7 SA3	DUP1	Not applicable

Date	Groundwater Samples ID	Duplicate ID	Field/Trip Blanks
March 26, 2020	MW20-6	DUP	Field/Trip Blank

5.0 REVIEW AND EVALUATION

This section of the report presents a review and evaluation of the results of the borehole and monitoring well drilling and installation, monitoring and sampling activities conducted as part of the Phase Two ESA described herein.

5.1 Geology

The soil conditions encountered during the borehole drilling and test pitting are presented in the Record of Borehole sheets and provided in Appendix D as well as in the cross sections presented in Figure 5A and 5B. The following presents a summary of the subsurface soil conditions encountered during the investigation.

Boreholes were advanced to a maximum depth of 15.85 mbgs. It should be noted that the logs presented have been inferred from discontinuous samples and that geologic contacts noted on the logs represent a transition from one soil type to another rather than an exact plane of geologic change. Further, it should be noted that subsurface conditions encountered will vary between and beyond borehole sampling locations.

In general, the subsurface soil conditions encountered in the boreholes consisted a layer of fill (present at all test locations) underlain by native soil. In the boreholes, the fill consisted of gravelly sand and sandy silty clay, trace gravel and presence of rootlets up to an average depth of 2.20 mbgs and maximum depth of 4.11 mbgs. In general, the native soil below the fill consisted of sandy silt with trace gravel, silty to sandy clay and sandy silty to silty sand to the maximum borehole depth of 15.85 mbgs. Bedrock was not encountered during drilling. According to Geology Ontario, the reported depth to bedrock in the area of the Phase One Property is approximately 76.2 mbgs.

Based on the soil conditions encountered in the boreholes, the native soil is not considered a significant water bearing formation.

5.2 Groundwater: Elevations and Flow Direction

All monitoring wells drilled during the 2020 program were used in the interpretation of shallow groundwater contours and shallow groundwater flow direction. Any temporary fluctuation in water levels on the Phase Two Property is not anticipated to affect the conclusions of the Phase Two ESA.

The location and depth of the screens for the six new monitoring wells were selected based on the issues being investigated, conditions observed during drilling and were installed to straddle the anticipated water table. The base of the well screens monitored as part of this assessment range from approximately 7.62 to 15.24 metres bgs. A summary of the monitoring well construction details are presented in Table 1. No evidence of petroleum hydrocarbon free product or sheen in groundwater was observed.

The elevations of the potentiometric surface at each monitoring well are summarized in Table 2. Groundwater elevations ranged from 140.28 to 146.15 masl (0.31 to 6.62 mbgs) on March 26, 2020. Based on the interpreted groundwater elevation contours presented in Figure 6, the inferred groundwater flow in a south direction, towards Lake Ontario, with a local component to the southwest towards Massey Creek .

Seasonal fluctuation in water levels on the Site should be expected. Given the limited number of monitoring events, seasonal trends could not be identified; however, shallow groundwater water levels are typically highest following the spring recharge and decline throughout the summer and fall months into the winter. Any temporary fluctuation in water levels at the Phase Two Property is not anticipated to affect the conclusion of the Phase Two ESA. At the time of groundwater sample collection (March 26, 2020), the saturated screen length at the sampled locations was more than 3.1 m in all of the monitoring wells. The presence of the water table above the well screen interval is not considered to affect the conclusions of this Phase Two ESA given the observations during drilling, results of the field screening and the results of the analytical testing (i.e., no soil or groundwater impacts were identified).

5.3 Groundwater: Hydraulic Gradients

The average horizontal hydraulic gradient was estimated for shallow groundwater conditions based on water levels collected on March 26, 2020, and the inferred groundwater contours are presented in Figure 6. The average horizontal hydraulic gradient for shallow groundwater conditions was 0.034 m/m. The maximum horizontal hydraulic gradient for shallow groundwater conditions was 0.066 m/m and the minimum horizontal hydraulic gradient for shallow groundwater conditions was 0.001m/m. Variability in hydraulic gradients calculated at the Phase Two property may be related to the presence of fill throughout the Site.

Vertical hydraulic gradients were not calculated as nested monitoring wells were not installed as part of this Phase Two ESA Investigation.

5.4 Soil: Texture

Five soil samples from the Site were collected and submitted to Golder's geotechnical laboratory for grain size distribution analysis by sieve and hydrometer. The grain size information and interpretation for these samples are presented in the laboratory certificate of analysis in Appendix B.

Based on grain size analysis results, the overburden in the subsurface of the Site contains more than 50% particles (by mass) in the soil which were smaller than 75 µm in mean diameter. Per the definitions in O. Reg. 153/04, the soil on the Site is therefore considered to be medium and fine textured.

5.5 Soil: Field Screening

Headspace vapour measurements were conducted on the soil samples collected from the boreholes. Combustible gas vapour ranged from non-detect to 5 ppm and organic vapour measurements ranged from non-detect to 5 ppm.

The results of headspace vapour measurements did not identify indications of impacts and are presented on the Record of Borehole sheets in Appendix D.

5.6 Soil: Quality

For the purpose of assessing soil quality data, sample locations across the Site were evaluated relative to the applicable Site condition standards. Table 3 provides a summary of the soil samples submitted for analysis and the associated test parameters. The analytical results of soil samples are presented in Tables 5A through 5E and the laboratory certificates of analyses, provided in Appendix B.

A summary of the number of soil samples analysed and the number of soil samples exceeding the MECP Table 3 Standards is provided below:

Parameter	Number of Soil Samples Analysed (including duplicates)	Number Soil Samples Exceeding the Table 3 Standards
VOCs	8	0
Metals & ORP	7	0
PHC F1-F4/BTEX	8	0
PAH	7	0
PCB	1	0

All soil samples submitted for analysis met the applicable Site condition standards, for the parameters tested. The distance from Site centre to the nearest downgradient water body was measured to be 180 m west.

5.7 Groundwater: Quality

For the purpose of assessing groundwater chemistry data, sample locations across the Site were evaluated relative to the applicable Site condition standards. Monitoring well construction details are summarized in Table 1 and a list of groundwater samples submitted for laboratory analysis is provided in Table 4. The analytical results for groundwater samples are presented in Tables 6A through 6E and the laboratory certificates of analyses are provided in Appendix B.

A summary of the number of groundwater samples analysed and number of samples exceeding the MECP Table 3 Standards is provided below:

Parameter	Number of Groundwater Samples Analysed (including duplicates)	Number of Groundwater Samples Exceeding the 2011 Table 3 Standards
VOCs	8	0
Metals & ORP	7	0
PHC F1-F4/BTEX	8	0
PAH	7	0
PCB	1	0

No groundwater concentrations were found to exceed the applicable standards.

5.8 Sediment Quality

Sediment was not present at the Site, therefore, no sediment samples were collected as part of this investigation.

5.9 Quality Assurance and Quality Control Results

A certificate of analysis was received for each sample submitted for analysis. The results for QA/QC samples are presented in full in the laboratory certificates of analysis (Appendix B). QA/QC including calculation of relative percent differences ("RPD") of the reported results was conducted in accordance with the MOE document: *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act*, April 15, 2011.

To determine the precision of the analytical methods and field sampling procedures, blind duplicate samples were collected during soil and groundwater sampling. Precision is determined by the relative percent difference ("RPD") between the duplicate and original samples and was calculated as follows:

$$RPD = \frac{|x_1 - x_2|}{x_m}$$

Where: x1 - initial sample results

x2 - duplicate sample results

xm - mean of x1, x2

The analytical results of the primary and duplicate soil and groundwater samples indicated a satisfactory correlation between the primary and duplicate samples and were within the 30% recommended control limit in the Analytical Protocol.

Trip blank and equipment blank data for VOC/PHC F1 analysis indicated acceptable results with no detectable concentrations. Further QA/QC procedures included laboratory run duplicates, spikes and blanks indicating acceptable laboratory analytical data.

All certificates of analysis or analytical reports received pursuant to clause 47 (2) (b) of the regulation comply with subsection 47(3). A certificate of analysis or analytical report has been received for each sample submitted for analysis and is provided in Appendix B. The analytical laboratory did not qualify any of the analytical results.

Accordingly, the analytical data generated during the investigation are valid and representative and may be used in this Phase Two ESA without further qualification.

5.10 Phase Two Conceptual Site Model

This section summarizes Conceptual Site Model (“CSM”) for the property located at 683-685 Warden Avenue, Toronto (i.e., the “Site”). As per Section 43 of O.Reg. 153/04, this CSM establishes the current condition of the Site.

5.10.1 Phase One ESA Information

The Site consists of approximately 2.63 hectares (6.52 acres) of land. At the time the Phase One ESA, the Site was a empty land parcel partially covered with gravel areas on the south and grassed areas on the central and north portions. The Site building and associated parking area was demolished in 2009. Adjacent land uses included residential, commercial, institutional, parkland, industrial and undeveloped land. Figure 1 indicates the Site location and Figure 2 show the Phase One Property and Phase One Study Area.

Based on information reviewed as part of the Phase One ESA, the the Phase One Property was previously used for agricultural purposes since prior to 1947 and was later developed with an industrial building in 1955, with an addition constructed in 1966. The Site historically operated as an industrial facility for the manufacturing of metal sash windows between 1955 and the early 1970s, manufacturing of transformer during the 1970s, glass manufacturing between the late 1970s and the 1980s; and for the manufacturing of mattresses between the 1990s and 2009. The building was demolished in 2009 and the Site has remained undeveloped since this time. Following demolition, a portion of the Site was previously used for the storage of construction materials and construction office trailers.

5.10.2 Potentially Contaminating Activities

Based on the information obtained as part of the Phase One ESA, the following potentially contaminating activities (“PCAs”) were identified in association with the Site. The location of PCAs is provided on Figure 2.

Location	Potentially Contaminating Activity	Information Source	Rationale for Potential Contribution of the PCA to an APEC
Phase One Property	<i>#30 Importation of Fill Material of Unknown Quality</i>	Previous report and Site observations, EcoLog ERIS	The PCA is located on the Phase One Property and must be identified as an APEC.
	<i>#34. Metal Fabrication</i>	1956 FIP, 1967 PUR, city directories	The PCA is located on the Phase One Property and must be identified as an APEC.

Location	Potentially Contaminating Activity	Information Source	Rationale for Potential Contribution of the PCA to an APEC
	<i>#55. Transformer Manufacturing, Process and Use</i>	1956 FIP, 1967 PUP, previous reports	The PCA is located on the Phase One Property and must be identified as an APEC.
	<i>#28. Gasoline and Associated Products Storage in Fixed Tanks</i>	1956 FIP, 1967 PUP, 1976 PUR, previous reports	The PCA is located on the Phase One Property and must be identified as an APEC.
	<i>#46. Rail Yards, Tracks and Spurs</i>	1956 FIP, 1967 PUP, aerial photographs	The PCA is located on the Phase One Property and must be identified as an APEC.
	<i>#39. Paints Manufacturing, Processing and Bulk Storage</i>	1956 FIP, 1967 PUP, 1976 PR	The PCA is located on the Phase One Property and must be identified as an APEC.
	<i>#55. Transformer Manufacturing, Process and Use</i>	1976 PUR	The PCA is located on the Phase One Property and must be identified as an APEC.
	<i>#29. Glass Manufacturing</i>	City directories	The PCA is located on the Phase One Property and must be identified as an APEC.
	<i>#54. Textile Manufacturing and Processing</i>	City directories, EcoLog ERIS, previous reports	The PCA is located on the Phase One Property and must be identified as an APEC.
	<i>Other – (oil-water interceptor was historically located within the former on-Site industrial building.</i>	Previous reports	The PCA is located on the Phase One Property and must be identified as an APEC.
	<i>Other – (concrete box filled with impacted soil was previously identified within the former on-Site building.</i>	Previous reports	The PCA is located on the Phase One Property and must be identified as an APEC.
	<i>Other – (soil exceedance of anthracene - the exact location of this exceedance is unknown).</i>	Previous reports	The PCA is located on the Phase One Property and must be identified as an APEC.
	<i>Other – (soil exceedance of benzo(a)pyrene - the exact location of this exceedance is unknown).</i>	Previous reports	The PCA is located on the Phase One Property and must be identified as an APEC.

Location	Potentially Contaminating Activity	Information Source	Rationale for Potential Contribution of the PCA to an APEC
Phase One Study Area (excluding the Phase One Property)	<i>#46 Railyards, Tracks and Spurs</i>	Aerial photographs, previous reports	The nature of impacts associated with this PCA typically do not migrate through groundwater and are not anticipated to impact the Phase One Property.
	<i>#46 Railyards, Tracks and Spurs</i>	Aerial photographs and Site observations	The nature of impacts associated with this PCA typically do not migrate through groundwater and are not anticipated to impact the Phase One Property.
	<i>Other</i> – (dairy manufacturing facility was historically located at 671/681 Warden Avenue (immediately south to 135 m south) between the 1970s and the 1990s.	City directories, EcoLog ERIS	The nature of the operations associated with this PCA, and a previously filed RSC for this location, this PCA is not anticipated to impact the Phase One Property.
	<i>#28. Gasoline and Associated Products Storage in Fixed Tanks</i> – The facility at 681 Warden Avenue 135 m south) was historically listed with two 22,730 L diesel-containing USTs installed in 1991. It is noted that these tanks are no longer present.	EcoLog ERIS	Based on the separation distance, and the down-gradient location from the Site, PCA is not anticipated to impact the Phase One Property. In addition, it is noted that an RSC has been filed for this property.
	<i>#46 Railyards, Tracks and Spurs</i> – A Toronto Transit Commission Subway Station is present at 701 Warden Avenue (200 m north).	City directories, Site observations, aerial photographs	The nature of impacts associated with this PCA typically do not migrate through groundwater and are not anticipated to impact the Phase One Property.
	<i>#18 Electricity Generation, Transformation and Power Stations</i> – An electrical generating station is present at 699 Warden Avenue (70 m north).	City directories, Site observations, aerial photographs, EcoLog ERIS	The nature of impacts associated with this PCA typically do not migrate through groundwater and are not anticipated to impact the Phase One Property.
	<i>#28. Gasoline and Associated Products Storage in Fixed Tanks</i> – An engine derailment, resulting in a release of 500 L of diesel fuel to the ground was reported at 689 Warden Avenue (immediately north) in 1991. It is inferred that this property had a diesel tank.	EcoLog ERIS	Based on the up-gradient location of this PCA to the Site, and the nature of impacts associated with this PCA which may migrate through groundwater, the presence of this PCA may impact the Phase One Property.

Location	Potentially Contaminating Activity	Information Source	Rationale for Potential Contribution of the PCA to an APEC
	<i>Other</i> – Various industrial activities were reported at the facility located at 689 Warden Avenue (immediately north). This included the generation of various hazardous wastes.	City directories, EcoLog ERIS	Based on the up-gradient location of this PCA to the Site, and the nature of impacts associated with this PCA which may migrate through groundwater, the presence of this PCA may impact the Phase One Property.
	<i>#37. Operation of Dry Cleaning Equipment (where chemicals are used)</i> – A facility called Toronto Winsun Laundry was previously located at 689 Warden Avenue (immediately north), and reported a release of “blowdown water”. It is unknown if any dry cleaning operations took place at this location.	EcoLog ERIS	Based on the up-gradient location of this PCA to the Site, and the nature of impacts associated with this PCA which may migrate through groundwater, the presence of this PCA may impact the Phase One Property.
	<i>Other</i> – The property at 682 Warden Avenue (25 m west), reported the disposal of PCB wastes during the 1990s.	EcoLog ERIS	The nature of impacts associated with this PCA typically do not migrate through groundwater and are not anticipated to impact the Phase One Property.
	<i>#28. Gasoline and Associated Products Storage in Fixed Tanks</i> – The facility at 400 Danforth Road (210 m east) was listed with various USTs and ASTs containing diesel fuel and other liquids (not described). The tanks were installed between 1988 and 2000.	EcoLog ERIS	Based on the separation distance, and the cross-gradient location from the Site, PCA is not anticipated to impact the Phase One Property.
	<i>#28. Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems</i> – The facility at 400 Danforth Road (210 m east) is noted to be a service garage (Birchmount Garage) for the Toronto Transit Commission. This includes the generation of various wastes, including halogenated solvents, as well as several releases of diesel, coolants and motor oil.	EcoLog ERIS, Site observations	Based on the separation distance, and the cross-gradient location from the Site, PCA is not anticipated to impact the Phase One Property.

Location	Potentially Contaminating Activity	Information Source	Rationale for Potential Contribution of the PCA to an APEC
	<i>Other</i> – Various industrial activities were reported at the facility located at 663 Warden Avenue (240 m south). This included the generation of various hazardous wastes.	EcoLog ERIS, city directories	Based on the separation distance, and the down-gradient location from the Site, PCA is not anticipated to impact the Phase One Property.
	<i>#55. Transformer Manufacturing, Process and Use</i> – The presence of pole and pad-mounted transformers located within the Phase One Study Area.	Site observations	The nature of impacts associated with this PCA typically do not migrate through groundwater and are not anticipated to impact the Phase One Property.

5.10.3 Areas of Potential Environmental Concern

As per the above, four PCAs were identified as APECs given their location on the Site and the associated potential for these activities to have contributed to contamination at the Site. A summary of the APECs identified at the Phase Two Property based on the findings of the Phase One ESA is provided below along with a summary of the associated Phase Two ESA testing and findings. The location of each APEC is shown on Figure 3. The Phase Two ESA test locations are shown along with the APEC locations on Figure 4.

APEC ID	Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³	Media Potentially Impacted (Groundwater, soil and/or Sediment)
A	APEC A1 - Fill was reported to be present at the Site up to a maximum depth of 5.5 m below grade. In addition, stockpiles of material are noted at ground surface.	Across the Site	#30. Importation of Fill Material of Unknown Quality	On-Site	PHC, PAH, metals, hydride metals and ORP	Soil
	APEC A2 - Previously identified soil exceedance of anthracene (the exact location of this exceedance is unknown).	Site wide	Other	On-Site	PAH	Soil

APEC ID	Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³	Media Potentially Impacted (Groundwater, soil and/or Sediment)
	APEC A3 - Previously identified soil exceedance of benzo(a)pyrene (the exact location of this exceedance is unknown).	Site wide	Other	On-Site	PAH	Soil
B	APEC B1 - The Site was historically operated as an industrial facility for the manufacturing of metal sash windows between 1955 and the early 1970s.	Former building area	#34. Metal Fabrication	On-Site	PHC, PAH, VOC, metals, hydride metals and ORP	Soil and groundwater
	APEC B2 - The former industrial activities included painting activities and storage. This included spray painting and powder paint applications.	Former building area	#39. Paints Manufacturing, Processing and Bulk Storage	On-Site	VOC	Soil and groundwater
	APEC B3 - The Site was historically operated as a glass manufacturing facility between the late 1970s and the 1980s.	Former building area	#29. Glass Manufacturing	On-Site	VOC, metals, hydride metals and ORP	Soil and groundwater
	APEC B4 - The Site was historically operated as a mattress manufacturing facility between the 1990s and 2009.	Former building area	#54. Textile Manufacturing and Processing	On-Site	PHC, BTEX, VOC	Soil and groundwater
	APEC B5 - The Site was historically operated as a transformer manufacturing facility during the 1970s.	Former building area	#55. Transformer Manufacturing, Process and Use	On-Site	PHC, PCB	Soil and groundwater

APEC ID	Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³	Media Potentially Impacted (Groundwater, soil and/or Sediment)
	APEC B6 - An oil-water interceptor was historically located within the former industrial building.	Former building area	Other	On-Site	PHC, BTEX, VOC	Soil and groundwater
	APEC B7 - A concrete box filled with impacted soil was previously identified within the former building.	Former building area	Other	On-Site	PHC, PAH, VOC	Soil
C	APEC C1 - Two transformers were previously located in the northwest portion of the Site (northwest of the former building).	Area north of the western portion of former building.	#55. Transformer Manufacturing, Process and Use	On-Site	PCB	Soil
D	APEC D1 - A fuel oil UST was previously located northwest of the former building. In addition, groundwater exceedances of PHC F3 and F4 were previously identified in the vicinity of the former UST.	Area north of the western portion of former building.	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and groundwater
E	APEC E1 - A railway spur was previously located north of the building, entering from the east. The spur was removed at some point between 1975 and 1985.	Northern and eastern portions of the Site.	#46. Rail Yards, Tracks and Spurs	On-Site	PHC, PAH, metals, hydride metals and ORP	Soil

APEC ID	Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³	Media Potentially Impacted (Groundwater, soil and/or Sediment)
F	APEC F1 - An engine derailment, resulting in a release of 500 L of diesel fuel to the ground was reported at 689 Warden Avenue (immediately north) in 1991. It is inferred that this property had a diesel tank.	Northern boundary of the Site	#28. Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	PHC, BTEX	Groundwater
	APEC F2 - Various industrial activities were reported at the facility located at 689 Warden Avenue (immediately north). This included the generation of various hazardous wastes.	Northern boundary of the Site	Other	Off-Site	PHC, PAH, BTEX, VOC, metals, hydride metals and ORP	Groundwater
	APEC F3 - A facility called Toronto Winsun Laundry was previously located at 689 Warden Avenue (immediately north), and reported a release of "blowdown water". It is unknown if any dry cleaning operations took place at this location.	Northern boundary of the Site	#37. Operation of Dry Cleaning Equipment (where chemicals are used)	Off-Site	VOC	Groundwater

APEC A1 – Fill Material

- Fill was reported to be present at the Site up to a maximum depth of 5.5 m below grade. In addition, stockpiles of material are noted at ground surface. Seven soil and six groundwater samples from the fill were collected and submitted for laboratory analysis for this APEC.

The COCs associated with this APEC were identified to include PHC, PAH, metals, hydride metals and ORP with the potential for soil and groundwater impacts.

The investigation of this APEC included the collection and analysis of soil and groundwater samples (BH20-1 to BH20-7) for the identified COCs. The reported concentrations were below the applicable Site condition standards.

APEC A2 and A3– Previously identified soil exceedance of anthracene and benzo(a)pyrene

- According to previous Phase One ESA executed by others, anthracene and benzo(a)pyrene exceedances were identified in soil samples to be present at the Site, although the location of this exceedance was not provided by the historical reports.

The COCs associated with these APECs were identified to include PAH with the potential for soil and groundwater impacts.

The investigation of these APECs included the collection and analysis of soil and groundwater samples (BH20-1 to BH20-7) for the identified COCs. The reported concentrations were below the applicable Site condition standards.

APEC B1 to B7 – Historical Industrial Operations

Based on the Phase One ESA, the following are known about these APECs:

- The Site was historically operated as an industrial facility for the manufacturing of metal sash windows between 1955 and the early 1970s. The former industrial activities included painting activities and storage. This included spray painting and powder paint applications. The Site was also historically operated as a glass manufacturing facility between the late 1970s and the 1980s, then operated as a transformer manufacturing facility during the 1970s and operated as a mattress manufacturing facility between the 1990s and 2009. An oil-water interceptor was historically located within the former industrial building and a concrete box filled with impacted soil was previously identified within the former building.

The COCs associated with these APECs were identified to include VOC, PHC F1-F4, BTEX, PAH, PCB, metals hydride metals and ORP with the potential for soil and groundwater impacts.

The investigation of these APECs included the collection and analysis of soil (BH20-3, BH20-6 and BH20-7) and groundwater samples (BH20-3 and BH20-6) for the identified COCs. The reported concentrations for the tested COCs were below the applicable Site condition standards.

APEC C - Former Pad-Mounted Transformer

Based on the Phase One ESA, the following is known about the former pad-mounted transformer APEC:

- A former pad-mounted transformer had been located at the northwest portion of the former Site building and that it had been removed at the time the building was demolished. No reports were indicated to be available regarding the disposal of the transformer nor the dielectric oil.

The COC associated with this APEC was identified to include PCB with the potential for soil impacts.

The investigation of this APEC included the collection and analysis of soil a sample (BH20-6) for the identified COC. The reported concentrations were below the applicable Site condition standards.

APEC D - Former Fuel Oil UST

Based on the Phase One ESA, the following is known about the former fuel oil UST:

- According to previous Phase One report executed by others and OPTA Enviroscan report, a fuel oil UST had been located at the northwest portion of the facade of the former Site building at two different positions and that it had been removed at the time the building was demolished. No reports were indicated to be available regarding the removal of the UST. The UST was not identified or investigated as part of any of the previous Site investigations and no further information was available.

The COCs associated with this APEC were identified to include PAH, PHC F1-F4 and BTEX with the potential for soil and groundwater impacts.

The investigation of this APEC included the collection and analysis of soil and groundwater samples (BH20-1) for the identified COCs. The reported concentrations were below the applicable Site condition standards.

APEC D - Former Rail Spur

Based on the Phase One ESA, the following are known about this APEC:

- According to previous Phase One report executed by others and ERIS report, a railway spur was previously located north of the building, entering from the east. The spur was removed at some point between 1975 and 1985. .

The COCs associated with this APEC were identified to include PHC, PAH, metals, hydride metals and ORP with the potential for soil and groundwater impacts.

The investigation of this APEC included the collection and analysis of soil and groundwater (BH20-4) for the identified COCs. The concentrations of the tested COCs were below the applicable Site condition standards.

APEC F1 to F3 – Off-Site Potentially Contaminating Activities

The footprint of APEC L occupies the Northern portion of the Phase Two Property, due to potential groundwater migration from PCAs located currently or historically to the north of the Phase Two Property. Two boreholes and one monitoring well were installed to investigate this APEC including BH20-6 and BH20-7.

The COCs associated with these APECs were identified to include one or all of the following PHC, PAH, BTEX, VOC, metals, hydride metals and ORP with the potential for soil and groundwater impacts.

The investigation of these APECs included the collection and analysis of soil and groundwater (BH20-6 and BH20-7) for the identified COCs. The concentrations of the tested COCs were below the applicable Site condition standards.

5.10.4 Subsurface Structures and Utilities

No underground utility drawings were available for the Phase Two Property. However, the former Site building and surrounding area are believed to have been serviced by underground water, gas, phone, sanitary and storm sewers. Similarly, developed lands to the immediate north, west and south of the Site are also serviced.

Golder retained the services of All Clear Locates, a local, private underground utilities locator, to scan the general investigation areas as part of the Phase Two ESA investigation. All Clear Locates cleared drilling locations and no

buried services were located in the vicinity of the test locations. A scan of the entire Site was not conducted as part of the Phase Two ESA.

Based on Golder's review of previous environmental reports in the 2020 Phase One ESA, no underground utility drawings were available for the Phase Two Property.

Based on the above and the findings of the Phase Two ESA, the absence of buried utility drawings is not considered to have impacted this assessment or the findings.

5.10.5 Physical Setting

5.10.5.1 Topography

The Site and surrounding area are generally flat, with a gradual slope toward the southwest towards Massey Creek. The Site is at a similar grade to the adjoining properties, with the exception of a gradual slope towards Massey Creek, situated approximately 180 m west of the Site. Generally, a gentle slope to the south is present.

5.10.5.2 Stratigraphy

Representative geologic cross-sections of the Site are presented in Figure 6A and 6B. In general, the subsurface soil conditions encountered in the boreholes consisted a layer of fill (present at all test locations) underlain by native soil. In the boreholes, the fill consisted of gravelly sand and sandy silty clay, trace gravel and presence of rootlets up to an average depth of 2.20 mbgs and maximum depth of 4.11 mbgs. In general, the native soil below the fill consisted of sandy silt with trace gravel, silty to sandy clay and sandy silty to silty sand to the maximum borehole depth of 15.85 mbg. Bedrock was not encountered during drilling. According to Geology Ontario, the reported depth to bedrock in the area of the Phase Two Property is approximately 75 mbgs.

5.10.5.3 Hydrogeological Characteristics

The regional groundwater flow direction is expected to be towards Lake Ontario, located approximately 2.1 km to the south/southeast. The direction of local groundwater flow at the Site was measured to be to the southwest (Figure 6). Groundwater elevations ranged from 140.28 to 146.15 masl (0.31 to 6.62 mbgs) on March 26, 2020. The water levels are presented on Figure 6 and are considered representative of static conditions.

The average horizontal hydraulic gradient was estimated for shallow groundwater conditions based on water levels collected on March 26, and the inferred groundwater contours are presented in Figure 6. The average horizontal hydraulic gradient for shallow groundwater conditions was 0.034 m/m. Vertical hydraulic gradients were not calculated, as nested monitoring wells were not installed as part of this Phase Two ESA investigation. No free product or aquitards were identified during the course of the Phase Two ESA.

The following additional observations are provided:

- There are no areas of natural significance at the Site or within 30m of the Site. Selected soil samples were tested for pH and were noted to be within a normal range with readings between 7.38 to 8.62;
- Section 43.1(a) of Ontario Regulation 153/04 does not apply at the Site. Bedrock was not encountered during the Phase Two investigation and is deeper than 2 mbgs. The reported depth to bedrock in the Phase One ESA is 75 mbgs;
- No water bodies or areas of natural significance were identified on or within 30 m of the Phase One Study Area. Massey Creek is located approximately 180 m west of the Site;

- Potable water in the vicinity of the Phase One Property is provided by the City of Toronto and is obtained from Lake Ontario. No potable water wells were identified on the Phase One Property;
- Soil has not been brought from another property and placed on, in or under the Site as part of this Phase Two ESA or during the course of the Phase Two ESA; and
- The Site is to be redeveloped for residential use.

5.10.6 Applicable Standards

The analytical results of soil and groundwater samples collected for this Phase Two ESA were compared to the Table 3 generic site conditions standards (residential/parkland/institutional property use, medium to fine soil texture) presented in “*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, April 15, 2011*”. The applicable Site condition standards were selected based on the following rationale:

- The Phase Two Property is not located in an area designated in a city official plan as a well-head protection area or other designation identified by the city for the protection of ground water;
- No water bodies were identified on the Phase Two Property;
- The proposed future use of the Site as residential;
- Based on field observations and grain size analysis results, the soil present at the Site is estimated to consist of soil having a grain size distribution with 50 percent or more by mass of particles that are smaller than 75 µm mesh. Under the definition presented in O. Reg. 153/04, the soil at the Site is therefore considered to be medium and fine textured;
- The Site and surrounding properties located in whole or in part within 250 metres of the Site are within an area that is municipally serviced by a water supply that does not rely on potable groundwater as its source;
- The closest water body is Massey Creek, which is located approximately 180 m west of the Site;
- There are no features on the Phase Two Property that would meet the conditions of an environmentally sensitive Site, as described in Section 41;
- The pH of soil at the Site is greater than 5 and less than 9; and
- The overburden thickness is greater than 2 metres over more than one-third of the Phase Two Property.

Based on the above, the MOE 2011 Table 3 Standards were used to assess the soil and groundwater conditions at the Site.

5.10.7 Contaminated Media

No exceedances were identified in soil and/or groundwater upon comparison with the Table 3 Standards. Sediment is not present at the Site. Based on the results of the soil and groundwater analysis, it was determined that soil vapour testing was not required.

5.10.8 Contaminants Exceeding Applicable Standards at the Site

No exceedances were identified in soil and/or groundwater.

5.10.9 Description of Areas of Contamination on the Property

There are no areas of contamination on the property.

5.10.10 Potential Influence of Utilities on Contaminant Migration

No exceedances were observed in analyzed soil and groundwater samples, thus no utilities influenced on the migration of contaminants.

5.10.11 Description of Contaminants

There are no contaminants on the property.

5.10.12 Migration of Contaminants

There is no contamination on the property. Therefore, there is no migration of any contaminants.

5.10.13 Meteorological and Climatic Considerations

Seasonal fluctuation in water levels on the Site should be expected. Given the limited number of monitoring events, seasonal trends could not be identified, however shallow groundwater water levels are typically highest following the spring recharge and decline throughout the summer and fall months into the winter.

5.10.14 Potential for Soil Vapour Intrusion

No exceedances were observed in analyzed soil and groundwater samples. Therefore, there is no potential for soil vapour intrusion.

6.0 CONCLUSIONS

The following conclusions are drawn from the findings of this Phase Two ESA:

- The soil conditions below the surface cover consisted of fill material, native soil and bedrock were not encountered during this Phase Two ESA investigation. The groundwater levels were present within the native material and the inferred direction of groundwater flow was to the southwest, towards Massey Creek and downgradient towards Lake Ontario.
- Seven soil samples were analyzed for Metal and ORP, PAH, PHC, VOC from seven locations and PCB was sampled and analyzed in one location at the Site, which its concentrations met the Table 3 Standards;
- Six groundwater samples were analyzed for Metal and ORP, PAH, PHC, VOC from seven locations and PCB was sampled and analyzed in one location at the Site, which its concentrations met the Table 3 Standards;
- As the Phase Two ESA had not identified impacts in excess of the applicable Site condition standards (the Table 3 Standards), a Risk Assessment as per O. Reg. 153/04 is not required for the Site, in support of the filing of a Record of Site Condition; and
- It is noted that although all soil and groundwater samples collected during this Phase Two ESA satisfied the generic Table 3 site condition standards ("SCS"), historic environmental investigations indicate the potential presence of polycyclic aromatic hydrocarbon ("PAH") impacts to shallow soil at unspecified locations across the Site. As such, it is recommended that shallow soil be stripped and tested for PAH as part of Site preparation during future redevelopment prior to removal from, or reuse on the Site.

7.0 REFERENCES

Phase One Environmental Site Assessment, 683 to 685 Warden Avenue, Toronto, Ontario, dated April, 2020 (revised)

Quaternary Geology of Ontario, Southern Sheet. Map 2556. Ontario Ministry of Development and Mines dated 1991 (Map No. 2556, Quaternary Geology of Ontario, Southern Sheet, 1991).

Bedrock Geology of Ontario, Southern Sheet. Map 2544. Ontario Ministry of Development and Mines dated 1991 (Map No. 2544, Bedrock Geology of Ontario, Southern Sheet, 1991).

8.0 LIMITATIONS

This report was prepared for the exclusive use of Choice Properties REIT. The report, which specifically includes all tables, figures and appendices, is based on data and information, collected during conducting the Phase Two ESA, and is based solely on the conditions of the property at the time of conducting investigations, supplemented by historical information and data obtained by Golder Associates Ltd. as described in this report.

The assessment of environmental conditions at this Site has been made using the results of field screening techniques and chemical analysis of soil and groundwater samples at a limited number of locations. The Site conditions between sampling locations have been inferred based on conditions observed at the sampling locations. Conditions may vary from these sample locations. Additional study, including further investigation, can reduce the inherent uncertainties associated with this type of study. However, it is never possible, even with exhaustive sampling and testing, to dismiss the possibility that part of a Site may be contaminated and remain undetected.

The services performed as described in this report were conducted in a manner consistent with that level of care and skill normally exercised by other members of the engineering and science professions currently practicing under similar conditions, subject to the time limits and financial and physical constraints applicable to the services.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. Golder Associates Ltd. accepts no responsibility for damages, if any, suffered by any third party (other than as noted above) as a result of decisions made or actions based on this report.

The content of this report is based on information collected during the drilling, soil and groundwater sampling activities, our present understanding of the Site conditions, and our professional judgement in light of such information at the time of this report. This report provides a professional opinion and therefore no warranty is expressed, implied, or made as to the conclusions, advice and recommendations offered in this report. This report does not provide a legal opinion regarding compliance with applicable laws. With respect to regulatory compliance issues, it should be noted that regulatory statutes and the interpretation of regulatory statutes are subject to change.

The findings and conclusions of this report are valid only as of the date of this report. If new information is discovered in future work, including excavations, borings or other studies, Golder Associates Ltd. should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

The monitoring wells installed as part of this project have been constructed using licensed drilling/well contractors employing licensed well technicians. It is owner's responsibility to have a licensed well technician properly abandon all monitoring wells, if required.

9.0 CLOSURE

We trust that this report meets your current requirements. Should any clarification or further information be required, please contact the undersigned.

Signature Page

Golder Associates Ltd.



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Environmental Scientist



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TABLES

Table 1
Monitoring Well Construction Details
683-685 Warden Avenue, Toronto, Ontario

Monitoring Well ID	Date Installed	Installed by	Well Diameter (mm)	Screen Length (m)	Screen Interval (mbgs)	Borehole Depth (mbgs)	Soil Lithology Description at Screened Section
BH20-1	10-Mar-20	Golder	50	3.05	12.19 to 15.24	15.24	Sandy SILT
BH20-2	11-Mar-20	Golder	50	3.05	4.57 to 7.62	7.62	SILT to Sandy SILT
BH20-3	11-Mar-20	Golder	50	3.05	4.57 to 7.62	7.62	SILT, trace sand
BH20-4	10-Mar-20	Golder	50	3.05	12.19 to 15.24	15.24	SILT, trace sand
BH20-5	12-Mar-20	Golder	50	3.05	12.19 to 15.24	15.24	Sandy SILT to SILT
BH20-6	09-Mar-20	Golder	50	3.05	4.57 to 7.62	7.62	Sandy SILTY CLAY, trace gravel

Notes:

mm = millimetres
m = metres
mbgs = metres below ground surface

Table to be read in conjunction with accompanying report

Table 2
Groundwater Elevations
683-685 Warden Avenue, Toronto, Ontario

Monitoring Well ID	Date of Monitoring	Ground Surface Elevation (masl)	Top of Pipe Elevation (masl)	Stick-Up Pipe	Depth to Water March 26, 2020 (mbtop)	Depth to Water (mbgs)	Groundwater Elevation (masl)	Free Phase Product Observation
BH20-1	26-Mar-20	147.02	148.10	1.09	7.71	6.62	140.39	No
BH20-2	26-Mar-20	146.36	147.38	1.02	7.10	6.08	140.28	No
BH20-3	26-Mar-20	146.79	147.70	0.91	2.29	1.38	145.41	No
BH20-4	26-Mar-20	146.03	147.10	1.07	4.40	3.33	142.70	No
BH20-5	26-Mar-20	145.76	146.77	1.01	5.93	0.31	140.84	No
BH20-6	26-Mar-20	146.66	147.72	1.06	1.57	0.51	146.15	No

Notes:

mbtop = metres below top of pipe
mbgs = metres below ground surface
masl = metres above sea level

Elevations are geodetic (CGVD-1928:1978) and are referred to a remaining Catch-basin ("CB") located east of old building footprint, in the central east portion of the site (ELEV=145.62masl - obtained from provided survey plan).

Table to be read in conjunction with accompanying report

Table 3
Summary of Soil Samples Submitted for Laboratory Analysis
683-685 Warden Avenue, Toronto, Ontario

Sample Locations	Total Depth (mbgs)	Sample ID	Sampling Date	Sample Depth (mbgs)	Soil Lithology Sample Description	Headspace Readings		Parameters Analyzed
						Gastech (ppm)	PID (ppm)	
BH20-1	15.37	SA1	10-Mar-20	0.10 to 0.60	Fill – Sandy SILT, trace to some gravel	2	2	Metals and ORP
		SA6	10-Mar-20	4.57 to 5.18	SILTY CLAY, some sand, trace gravel (Till)	0	0	VOC, PHC F1-F4, BTEX, PAH
BH20-2	15.62	SA2	10-Mar-20	0.76 to 1.37	Fill – Sandy SILTY CLAY, trace gravel	0	2	Metals and ORP
		SA7	10-Mar-20	2.28 to 2.89	Sandy SILT, trace gravel (Till)	0	2	VOC, PHC F1-F4, BTEX, PAH
BH20-3	15.84	SA2	11-Mar-20	0.76 to 1.37	Fill – Sandy SILTY CLAY, trace gravel	0	3	Metals and ORP
		SA7	11-Mar-20	6.09 to 6.70	SILTY CLAY to CLAYEY SILT, some gravel, trace sand (till)	0	3	VOC, PHC F1-F4, BTEX, PAH
BH20-4	15.85	SA1	9-Mar-20	0.10 to 0.60	Fill – SAND and GRAVEL, some fines	0	4	Metals and ORP
		SA6	9-Mar-20	4.57 to 5.18	Sandy CLAYEY SILT, trace gravel (Till)	0	2	VOC, PHC F1-F4, BTEX, PAH
BH20-5	15.85	SA2	12-Mar-20	0.76 to 1.37	Fill – Sandy SILTY CLAY, trace to some gravel	0	3	Metals and ORP
		SA3	12-Mar-20	1.52 to 2.13	Fill – Sandy SILTY CLAY, trace to some gravel	0	3	VOC, PHC F1-F4, BTEX, PAH
BH20-6	7.87	SA1	9-Mar-20	0.10 to 0.60	Fill – SILTY Clay, some sand and gravel	0	2	Metals and ORP
		SA6	9-Mar-20	4.57 to 5.18	Sandy SILTY CLAY, trace gravel (Till)	0	5	VOC, PHC F1-F4, BTEX, PAH, PCB
BH20-7	8.23	SA1	9-Mar-20	0.10 to 0.60	Fill – SILTY CLAY, some sand, trace gravel	5	5	Metals and ORP
		SA3	9-Mar-20	1.52 to 2.13	Sandy SILT, trace gravel (Till)	0	4	VOC, PHC F1-F4, BTEX, PAH
		DUP1						

Notes:

m bgs	= metres below ground surface
ORP	= other regulated parameters
BTEX	= benzene, toluene, ethylbenzene, xylene
VOC	= volatile organic compounds
PHC	= petroleum hydrocarbons
PAH	= polycyclic aromatic hydrocarbons
PCB	= polychlorinated biphenils
ppm	= parts per million

Table to be read in conjunction with accompanying report

Summary of Groundwater Samples Submitted for Laboratory Analysis
683-685 Warden Avenue, Toronto, Ontario

Well ID	Sample ID	Well Depth (m bgs)	Lithology Description at Screened Section	Screen Interval (mbgs)	Parameters Analyzed
BH20-1	BH20-1	15.24	Sandy SILT	12.19 to 15.24	VOC, PHC (F1-F4), BTEX, metals and ORP
BH20-2	BH20-2	7.62	SILT to Sandy SILT	4.57 to 7.62	VOC, PHC (F1-F4), BTEX, metals and ORP
BH20-3	BH20-3	7.62	SILT, trace sand	4.57 to 7.62	VOC, PHC (F1-F4), BTEX, metals and ORP
BH20-4	BH20-4	15.24	SILT, trace sand	12.19 to 15.24	VOC, PHC (F1-F4), BTEX, metals and ORP
BH20-5	BH20-5	15.24	Sandy SILT to SILT	12.19 to 15.24	VOC, PHC (F1-F4), BTEX, metals and ORP
BH20-6	BH20-6	7.62	Sandy SILTY CLAY, trace gravel	4.57 to 7.62	VOC, PHC (F1-F4), BTEX, PCB, metals and ORP

Notes:

m bgs	= metres below ground surface
ORP	= other regulated parameters
BTEX	= benzene, toluene, ethylbenzene, xylene
VOC	= volatile organic compounds
PHC	= petroleum hydrocarbons
PAH	= polycyclic aromatic hydrocarbons
PCB	= polychlorinated biphenils

Table to be read in conjunction with accompanying report

Soil Analytical Results - Metals, Hydride Metals and ORP
683-685 Warden Avenue, Toronto, Ontario

Location ID				BH20-1	BH20-2	BH20-3	BH20-4	BH20-5	BH20-6	BH20-7
Sample ID				BH20-1 SA1	BH20-2 SA1	BH20-3 SA2	BH20-4 SA1	BH20-5 SA2	BH20-6 SA1	BH20-7 SA1
Date Sampled				10-Mar-20	10-Mar-20	11-Mar-20	9-Mar-20	12-Mar-20	9-Mar-20	9-Mar-20
Sample Depth (m bgs)				0.10-0.76	0.10-0.76	0.76-1.52	0.10-0.76	0.76-1.52	0.10-0.76	0.10-0.76
Parameter	Unit	Table 3 Standard	RDL							
Antimony	µg/g	50	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	2	3	2	3	2	2	3
Barium	µg/g	670	2	29	58	43	46	29	51	36
Beryllium	µg/g	10	0.5	<0.5	0.6	<0.5	0.5	<0.5	<0.5	<0.5
Boron	µg/g	120	5	<5	6	<5	<5	<5	7	6
Boron (Hot Water Extractable)	µg/g	2	0.10	<0.10	0.61	0.13	0.72	0.19	0.23	0.19
Cadmium	µg/g	1.9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	10	21	17	17	12	14	13
Cobalt	µg/g	100	0.5	4.1	8	5.7	6.4	4.2	4.9	4.8
Copper	µg/g	300	1	8	16	12	11	10	9	11
Lead	µg/g	120	1	4	13	8	10	5	5	14
Molybdenum	µg/g	40	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	340	1	7	16	14	13	7	10	10
Selenium	µg/g	5.5	0.4	<0.4	<0.4	<0.4	0.5	<0.4	<0.4	<0.4
Silver	µg/g	50	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/g	3.3	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Uranium	µg/g	33	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vanadium	µg/g	86	1	17	29	25	26	19	21	24
Zinc	µg/g	340	5	19	50	35	41	26	26	78
Chromium, Hexavalent	µg/g	10	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	20	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	1.4	0.005	0.118	0.734	0.437	0.292	0.303	0.187	0.189
Sodium Adsorption Ratio	NA	12	NA	0.256	4.81	2.43	2.01	1.96	0.129	0.18
pH, 2:1 CaCl ₂ Extraction	pH Units	NV	NA	7.73	8.62	7.8	7.38	7.65	7.79	7.68

Notes:

Table 3 Standard

m bgs

µg/g

mS/cm

RDL

NV

NA

<

110

Table 3 Standard - Full Depth Generic Site Condition Standards in a non-Potable Ground Water Condition - Soil Standards - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils (April 15, 2011)

metres below ground surface

microgram per gram

microSiemens per centimetre

reported detection limit

no value

not applicable

below the laboratory reportable detection limit

above Table 3 Standard

Table to be read in conjunction with accompanying report

Soil Analytical Results - PAH
683-685 Warden Avenue, Toronto, Ontario

Location ID				BH20-1	BH20-2	BH20-3	BH20-4	BH20-5	BH20-6	BH20-7
Sample Description				BH20-1 SA6	BH20-2 SA4	BH20-3 SA7	BH20-4 SA6	BH20-5 SA3	BH20-6 SA3	BH20-7 SA3
Date Sampled				10-Mar-20	10-Mar-20	11-Mar-20	9-Mar-20	12-Mar-20	9-Mar-20	9-Mar-20
Sample Depth (m bgs)				4.52-5.18	2.28-2.89	6.09-6.70	4.52-5.18	1.52-2.13	1.52-2.13	1.52-2.13
Parameter	Unit	Table 3 Standard	RDL							
Naphthalene	µg/g	28	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	29	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	16	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.74	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	9.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	9.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.95	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
Benzo(g,h,i)perylene	µg/g	9.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	42	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:

Table 3 Standard

m bgs

µg/g

RDL

NV

NA

<

110

Table 3 Standard - Full Depth Generic Site Condition Standards in a non-Potable Ground Water Condition - Soil Standards - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils (April 15, 2011)

metres below ground surface

microgram per gram

reported detection limit

no value

not applicable

below the laboratory reportable detection limit

above Table 3 Standard

Table to be read in conjunction with accompanying report

Location ID				BH20-1	BH20-2	BH20-3	BH20-4	BH20-5	BH20-6	BH20-7	
Sample Description				BH20-1 SA6	BH20-2 SA4	BH20-3 SA7	BH20-4 SA6	BH20-5 SA3	BH20-6 SA3	BH20-7 SA3	DUP 1
Date Sampled				10-Mar-20	10-Mar-20	11-Mar-20	9-Mar-20	12-Mar-20	9-Mar-20	9-Mar-20	
Sample Depth (m bgs)				4.52-5.18	2.28-2.89	6.09-6.70	4.52-5.18	1.52-2.13	1.52-2.13	1.52-2.13	
Parameter	Unit	Table 3 Standard	RDL								Field Duplicate
F1 (C6 to C10)	µg/g	65	5	<5	<5	<5	<5	<5	9	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	65	5	<5	<5	<5	<5	<5	9	<5	<5
F2 (C10 to C16)	µg/g	250	10	13	<10	<10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g	NV	10	13	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	2500	50	71	<50	<50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g	NV	50	71	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	6600	50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	6600	50	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Table 3 Standard

m bgs

µg/g

RDL

NV

NA

<

110

Table 3 Standard - Full Depth Generic Site Condition Standards in a non-Potable Ground Water Condition - Soil Standards - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils (April 15, 2011)

metres below ground surface

microgram per gram

reported detection limit

no value

not applicable

below the laboratory reportable detection limit

above Table 3 Standard

Table to be read in conjunction with accompanying report

Soil Analytical Results - VOC
683-685 Warden Avenue, Toronto, Ontario

Location ID				BH20-1	BH20-2	BH20-3	BH20-4	BH20-5	BH20-6	BH20-7	
Sample Description				BH20-1 SA6	BH20-2 SA4	BH20-3 SA7	BH20-4 SA6	BH20-5 SA3	BH20-6 SA3	BH20-7 SA3	DUP 1
Date Sampled				10-Mar-20	10-Mar-20	11-Mar-20	9-Mar-20	12-Mar-20	9-Mar-20	9-Mar-20	
Sample Depth (m bgs)				4.52-5.18	2.28-2.89	6.09-6.70	4.52-5.18	1.52-2.13	1.52-2.13	1.52-2.13	
Parameter	Unit	Table 3 Standard	RDL								Field Duplicate
Dichlorodifluoromethane	µg/g	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.25	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	5.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	28	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.48	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	2.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.6	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	88	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	2.5	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.18	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	12	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.71	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.4	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.68	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.61	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	1.9	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	210	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.11	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	9	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	2.9	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	2.5	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	0.11	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	1.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g	NV	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	1.7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	43	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	0.094	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g	NV	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	12	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.57	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	30	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	0.081	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
n-Hexane	µg/g	88	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:

Table 3 Standard

m bgs

µg/g

RDL

NV

NA

<

below the laboratory reportable detection limit

110 above Table 3 Standard

Table 3 Standard - Full Depth Generic Site Condition Standards in a non-Potable Ground Water Condition - Soil Standards - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils (April 15, 2011)

metres below ground surface

microgram per gram

reported detection limit

no value

not applicable

below the laboratory reportable detection limit

above Table 3 Standard

Table to be read in conjunction with accompanying report

Soil Analytical Results - PCB
683-685 Warden Avenue, Toronto, Ontario

Location ID				BH20-6
Sample Description				BH20-6 SA1
Date Sampled				9-Mar-20
Depth (m bgs)				0.00-0.76
Parameter	Unit	Table 3 Standard	RDL	
PCBs	µg/g	1.1	0.1	<0.1

Notes:

Table 3 Standard Table 3 Standard - Full Depth Generic Site Condition Standards in a non-Potable Ground Water Condition - Soil Standards - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils (April 15, 2011)

m bgs metres below ground surface

µg/g microgram per gram

RDL reported detection limit

NV no value

NA not applicable

< below the laboratory reportable detection limit

110 above Table 3 Standard

Table to be read in conjunction with accompanying report

Location ID				MW20-1		MW20-2	MW20-3		MW20-4		MW20-5	MW20-6	
Sample Description				MW20-1		MW20-2	MW20-3		MW20-4		MW20-5	MW20-6	DUP1
Date Sampled				03/26/2020		03/26/2020	03/26/2020		03/26/2020		03/26/2020	03/26/2020	03/26/2020
Screen Section (m bgs)				12.19 to 15.24		4.57 to 7.62	4.57 to 7.62		12.19 to 15.24		12.19 to 15.24	4.57 to 7.62	
Parameter	Unit	Table 3 Standard	RDL		RDL			RDL		RDL			Field Duplicate
Dissolved Antimony	µg/L	6	1.0	<1.0	1.0	<1.0	<1.0	1.0	<1.0	1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	25	1.0	1	1.0	<1.0	<1.0	1.0	4.6	1.0	1.8	<1.0	<1.0
Dissolved Barium	µg/L	1000	2.0	277	2.0	81.8	95.4	2.0	144	2.0	263	64.1	65.6
Dissolved Beryllium	µg/L	4	0.50	<0.50	0.50	<0.50	<0.50	0.50	<0.50	0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	5000	10.0	30.9	10.0	59.6	18.5	10.0	36.5	10.0	28.7	98.3	103
Dissolved Cadmium	µg/L	2.7	0.20	<0.20	0.20	<0.20	<0.20	0.20	<0.20	0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	50	2.0	<2.0	2.0	<2.0	<2.0	2.0	<2.0	2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	<0.50	0.50	0.98	1.28	0.50	<0.50	0.50	<0.50	<0.50	<0.50
Dissolved Copper	µg/L	87	1.0	<1.0	1.0	2.3	<1.0	1.0	<1.0	1.0	<1.0	1.1	<1.0
Dissolved Lead	µg/L	10	0.50	<0.50	0.50	<0.50	<0.50	0.50	<0.50	0.50	0.54	<0.50	<0.50
Dissolved Molybdenum	µg/L	70	0.50	13.7	0.50	1.72	1.81	0.50	17.4	0.50	10.2	2.48	2.11
Dissolved Nickel	µg/L	100	1.0	1.4	1.0	8.7	3.8	1.0	<1.0	1.0	<1.0	<1.0	<1.0
Dissolved Selenium	µg/L	10	1.0	<1.0	1.0	<1.0	<1.0	1.0	<1.0	1.0	<1.0	<1.0	<1.0
Dissolved Silver	µg/L	1.5	0.20	<0.20	0.20	<0.20	<0.20	0.20	<0.20	0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	2	0.30	<0.30	0.30	<0.30	<0.30	0.30	<0.30	0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	20	0.50	1.01	0.50	0.97	4.56	0.50	3.07	0.50	0.62	<0.50	<0.50
Dissolved Vanadium	µg/L	6.2	0.40	0.74	0.40	1.84	0.62	0.40	0.5	0.40	0.8	<0.40	<0.40
Dissolved Zinc	µg/L	1100	5.0	<5.0	5.0	<5.0	<5.0	5.0	<5.0	5.0	<5.0	<5.0	<5.0
Mercury	µg/L	1	0.02	<0.02	0.02	<0.02	<0.02	0.02	<0.02	0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	5	<5	5	<5	<5	5	<5	5	<5	<5	<5
Cyanide, Free	µg/L	66	2	<2	2	<2	<2	2	<2	2	<2	<2	<2
Dissolved Sodium	µg/L	490000	50	47200	250	169000	26700	50	97600	50	39700	13800	14500
Chloride	µg/L	790000	500	66300	1000	387000	378000	500	28200	200	51400	6640	6700
Electrical Conductivity	uS/cm	NV	2	984	2	2130	1990	2	940	2	772	700	720
pH	pH Units	NV	NA	7.85	NA	7.91	7.72	NA	7.98	NA	8.04	7.94	7.96

Notes:

Table 3 Standard	Table 3 Standard - Full Depth Generic Site Condition Standards in a non-Potable Ground Water Condition - Non-Potable Groundwater Standards - All Types of Property Use (April 15, 2011)
m bgs	metres below ground surface
µg/L	microgram per litre
uS/cm	microsiemens per centimeter
RDL	reported detection limit
NV	no value
NA	not applicable
<	below the laboratory reportable detection limit
110	above Table 3 Standard

Table to be read in conjunction with accompanying report

Location ID				MW20-1	MW20-2	MW20-3	MW20-4	MW20-5	MW20-6	
Sample Description				MW20-1	MW20-2	MW20-3	MW20-4	MW20-5	MW20-6	DUP1
Date Sampled				03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020
Screen Section (m bgs)				12.19 to 15.24	4.57 to 7.62	4.57 to 7.62	12.19 to 15.24	12.19 to 15.24	4.57 to 7.62	
Parameter	Unit	Table 3 Standard	RDL							Field Duplicate
Naphthalene	µg/L	11	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.17	0.2
Anthracene	µg/L	2.4	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.41	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	4.1	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benz(a)anthracene	µg/L	1	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	3.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Notes:

Table 3 Standard Table 3 Standard - Full Depth Generic Site Condition Standards in a non-Potable Ground Water Condition - Non-Potable Groundwater Standards - All Types of Property Use (April 15, 2011)

m bgs metres below ground surface
µg/L microgram per litre
RDL reported detection limit
NV no value
NA not applicable
< below the laboratory reportable detection limit

110 above Table 3 Standard

Table to be read in conjunction with accompanying report

Location ID				MW20-1	MW20-2	MW20-3	MW20-4	MW20-5	MW20-6		Field Blank	Trip Blank
Sample Description				MW20-1	MW20-2	MW20-3	MW20-4	MW20-5	MW20-6	DUP1	Field Blank	Trip Blank
Date Sampled				03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020
Screen Section (m bgs)				12.19 to 15.24	4.57 to 7.62	4.57 to 7.62	12.19 to 15.24	12.19 to 15.24	4.57 to 7.62			
Parameter	Unit	Table 3 Standard	RDL							Field Duplicate		
F1 (C6-C10)	µg/L	750	25	<25	<25	<25	<25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100	<100	<100	<100	NA	NA
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	<100	<100	<100	<100	<100	NA	NA
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100	<100	190	170	NA	NA
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100	<100	<100	190	170	NA	NA
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100	<100	<100	<100	NA	NA
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Table 3 Standard	Table 3 Standard - Full Depth Generic Site Condition Standards in a non-Potable Ground Water Condition - Non-Potable Groundwater Standards - All Types of Property Use (April 15, 2011)
m bgs	metres below ground surface
µg/L	microgram per litre
RDL	reported detection limit
NV	no value
NA	not applicable
<	below the laboratory reportable detection limit
110	above Table 3 Standard

Table to be read in conjunction with accompanying report

Location ID				MW20-1	MW20-2	MW20-3	MW20-4	MW20-5	MW20-6		Field Blank	Trip Blank
Sample Description				MW20-1	MW20-2	MW20-3	MW20-4	MW20-5	MW20-6	DUP1	Field Blank	Trip Blank
Date Sampled				03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020	03/26/2020
Screen Section (m bgs)				12.19 to 15.24	4.57 to 7.62	4.57 to 7.62	12.19 to 15.24	12.19 to 15.24	4.57 to 7.62			
Parameter	Unit	Table 3 Standard	RDL							Field Duplicate		
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	1.7	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	14	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	50	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	1800	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	22	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	5.0	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	200	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	5.0	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	5.0	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	16	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	24	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	25	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	30	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2.4	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	25	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	5.4	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	59	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	3	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	300	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	520	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Notes:

Table 3 Standard Table 3 Standard - Full Depth Generic Site Condition Standards in a non-Potable Ground Water Condition - Non-Potable Groundwater Standards - All Types of Property Use (April 15, 2011)

m bgs metres below ground surface

µg/L microgram per litre

RDL reported detection limit

NV no value

NA not applicable

< below the laboratory reportable detection limit

110 above Table 3 Standard

Table to be read in conjunction with accompanying report

Groundwater Analytical Results - PCB

Location ID				MW20-6	
Sample Description				MW20-6	DUP1
Date Sampled				03/26/2020	03/26/2020
Screen Section (m bgs)				4.57 to 7.62	
Parameter	Unit	Table 3 Standard	RDL		
PCBs	µg/L	3	0.1	<0.1	<0.1

Notes:

Table 3 Standard - Full Depth Generic Site Condition Standards in a non-Potable Ground Water Condition - Non-Potable Groundwater Standards - All Types of Property Use (April 15, 2011)

m bgs metres below ground surface

µg/L microgram per litre

RDL reported detection limit

NV no value

NA not applicable

< below the laboratory reportable detection limit

110 above Table 3 Standard

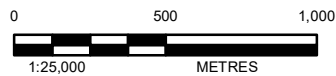
Table to be read in conjunction with accompanying report

FIGURES



LEGEND

STUDY AREA



REFERENCE(S)

BASE MAP SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT

Choice Properties Limited Partnership

CONSULTANT



YYYY-MM-DD 2020-04-16

DESIGNED JT

PREPARED JT

REVIEWED DS

APPROVED TAM

PROJECT

SUBMISSION OF RECORD OF SITE CONDITION
683 TO 685 WARDEN AVENUE, TORONTO, ONTARIO

TITLE

KEY PLAN

PROJECT NO.
20139596

CONTROL
0002

REV.
A

FIGURE
1



LEGEND

- FORMER RAILWAY
- FORMER BUILDING
- STUDY AREA

ID	Potentially Contaminating Activity
1	#30 Importation of Fill Material of Unknown Quality – Fill was reported to be present at the Site up to a maximum depth of 5.5 m below grade. In addition, surficial fill and stockpiled materials have been observed in 2020.
2	#34. Metal Fabrication – The Site was historically operated as an industrial facility for the manufacturing of metal sash windows between 1955 and the early 1970s.
3	#55. Transformer Manufacturing, Process and Use – Two transformers were previously located in the northwest portion of the Site (northwest of the former building).
4	#28. Gasoline and Associated Products Storage in Fixed Tanks – A fuel oil UST was previously located northwest of the former building. Previously identified groundwater exceedances of PHC F3 and F4 in the vicinity of the former UST.
5	#46. Rail Yards, Tracks and Spurs – A railway spur was previously located north of the on-Site building, entering from the eastern portion of the Site. The spur was removed at some point between 1975 and 1985.
6	#39. Paints Manufacturing, Processing and Bulk Storage – The former industrial activities included painting activities and storage. This included spray painting and powder paint applications.
7	#55. Transformer Manufacturing, Process and Use – The Site was historically operated as a transformer manufacturing facility during the 1970s.
8	#29. Glass Manufacturing – The Site was historically operated as a glass manufacturing facility between the late 1970s and the 1980s.
9	#54. Textile Manufacturing and Processing – The Site was historically operated as a mattress manufacturing facility between the 1990s and 2009.
10	Other – An oil-water interceptor was historically located within the former on-Site industrial building.
11	Other – A concrete box filled with impacted soil was previously identified within the former on-Site building.
12	Other – Previously identified soil exceedance of anthracene (the exact location of this exceedance is unknown).
13	Other – Previously identified soil exceedance of benzo(a)pyrene (the exact location of this exceedance is unknown).
14	#28. Gasoline and Associated Products Storage in Fixed Tanks – A release of 500 L of diesel fuel (from engine derailment) to the ground was reported at 689 Warden Avenue (immediately north) in 1991. It is inferred that this property had a diesel tank.
15	Other – Various industrial activities were reported at the facility located at 689 Warden Avenue (immediately north). This included the generation of various hazardous wastes.
16	#37. Operation of Dry Cleaning Equipment (where chemicals are used) – A facility called Toronto Winsun Laundry was previously located at 689 Warden Avenue (immediately north), and reported a release of "blowdown water". It is unknown if any dry cleaning operations took place at this location.

0 25 50

1:1,000 METRES

NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)
BASE DATA - MNR LIO, OBTAINED 2017
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BASE IMAGERY SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
Choice Properties Limited Partnership

PROJECT
SUBMISSION OF RECORD OF SITE CONDITION
683 TO 685 WARDEN AVENUE, TORONTO, ONTARIO

TITLE
POTENTIALLY CONTAMINATING ACTIVITIES

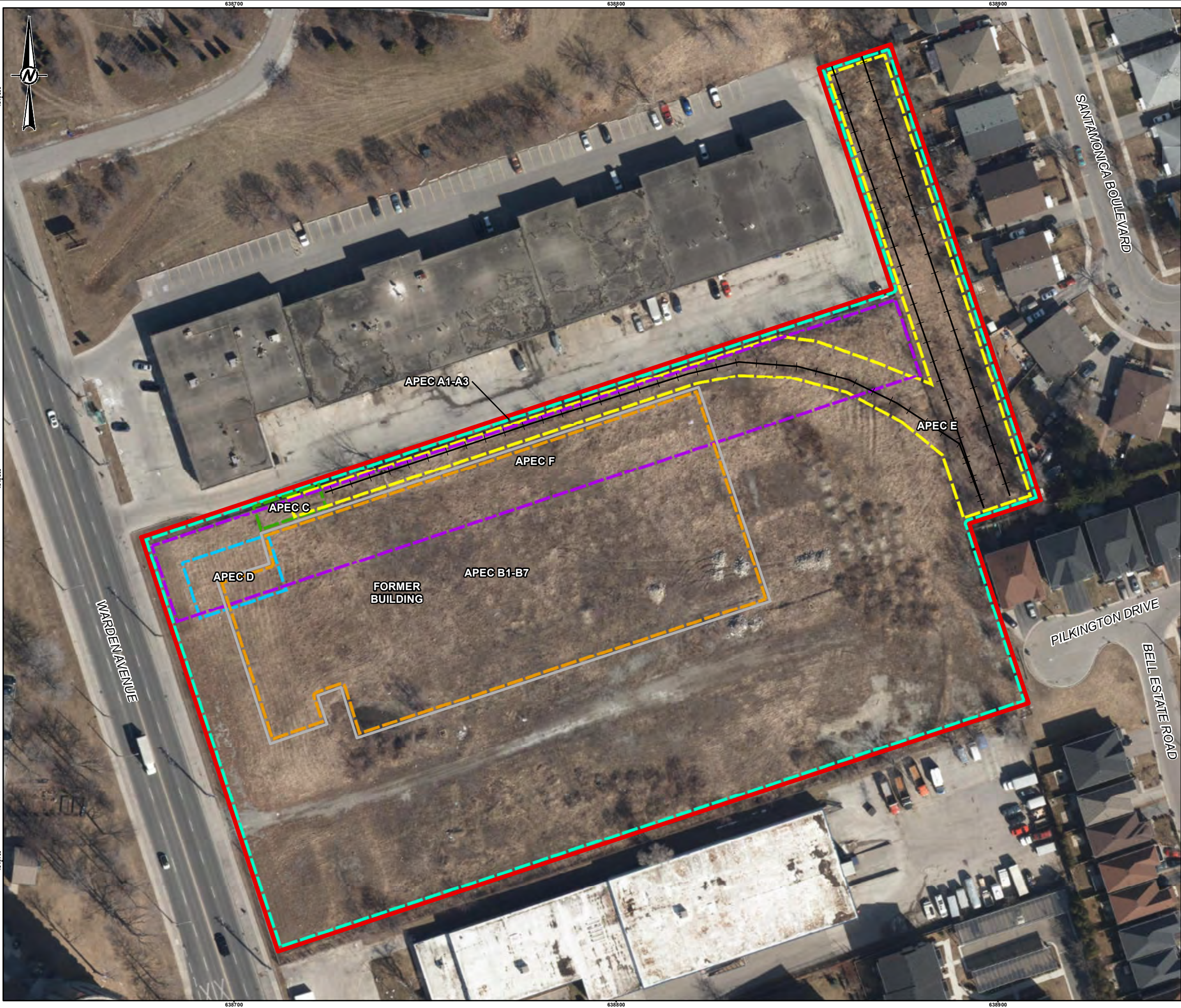
CONSULTANT	YYYY-MM-DD	2020-04-20
	DESIGNED	JT
	PREPARED	JT
	REVIEWED	JS
	APPROVED	TAM

PROJECT NO.
20139596

CONTROL
0002

REV.

FIGURE
2



LEGEND

— FORMER_RAILWAY

▭ STUDY AREA

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC)

- APEC A1-A3
- APEC B1-B7
- APEC C
- APEC D
- APEC E
- APEC F

ID	Potentially Contaminating Activity
APEC A1 – SITE WIDE	#31. Importation of Fill Material of Unknown Quality – Fill was reported to be present at the Site up to a maximum depth of 5.5 m below grade. In addition, stockpiles of material are noted at ground surface.
APEC A2 – SITE WIDE	OTHER - Previously identified soil exceedance of anthracene (the exact location of this exceedance is unknown).
APEC A3 – SITE WIDE	OTHER - Previously identified soil exceedance of benzo(a)pyrene (the exact location of this exceedance is unknown).
APEC B1 – FORMER BUILDING AREA	#34. Metal Fabrication - The Site was historically operated as an industrial facility for the manufacturing of metal sash windows between 1955 and the early 1970s.
APEC B2 – FORMER BUILDING AREA	#39. Paints Manufacturing, Processing and Bulk Storage - The former industrial activities included painting activities and storage. This included spray painting and powder paint applications.
APEC B3 – FORMER BUILDING AREA	#29. Glass Manufacturing - The Site was historically operated as a glass manufacturing facility between the late 1970s and the 1980s.
APEC B4 – FORMER BUILDING AREA	#54. Textile Manufacturing and Processing - The Site was historically operated as a mattress manufacturing facility between the 1990s and 2009.
APEC B5 – FORMER BUILDING AREA	#55. Transformer Manufacturing, Process and Use - The Site was historically operated as a transformer manufacturing facility during the 1970s.
APEC B6 – FORMER BUILDING AREA	OTHER - An oil-water interceptor was historically located within the former industrial building.
APEC B7 – FORMER BUILDING AREA	OTHER - A concrete box filled with impacted soil was previously identified within the former building.
APEC C1 – AREA NORTH OF THE WESTERN PORTION OF THE FORMER BUILDING	#55. Transformer Manufacturing, Process and Use - Two transformers were previously located in the northwest portion of the Site (northwest of the former building).
APEC D1 – AREA NORTH OF THE WESTERN PORTION OF THE FORMER BUILDING	#28. Gasoline and Associated Products Storage in Fixed Tanks - A fuel oil UST was previously located northwest of the former building. In addition, groundwater exceedances of PHC F3 and F4 were previously identified in the vicinity of the former UST.
APEC E1 – AREA NORTH OF THE WESTERN PORTION OF THE FORMER BUILDING	#46. Rail Yards, Tracks and Spurs - A railway spur was previously located north of the building, entering from the east. The spur was removed at some point between 1975 and 1985.
APEC F1 – NORTHERN BOUNDARY OF SITE	#28. Gasoline and Associated Products Storage in Fixed Tanks - An engine derailment, resulting in a release of 500 L of diesel fuel to the ground was reported at 689 Warden Avenue (immediately north) in 1991. It is inferred that this property had a diesel tank.
APEC F2 – NORTHERN BOUNDARY OF SITE	OTHER - Various industrial activities were reported at the facility located at 689 Warden Avenue (immediately north). This included the generation of various hazardous wastes.
APEC F3 – NORTHERN BOUNDARY OF SITE	#37. Operation of Dry Cleaning Equipment (where chemicals are used) - A facility called Toronto Winsun Laundry was previously located at 689 Warden Avenue (immediately north), and reported a release of "blowdown water". It is unknown if any dry cleaning operations took place at this location.

02550

1:1,000METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2017
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BASE IMAGERY SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT
CHOICE PROPERTIES REIT

PROJECT
SUBMISSION OF RECORD OF SITE CONDITION
683 TO 685 WARDEN AVENUE, SCARBOROUGH, ONTARIO

TITLE
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

CONSULTANT	YYYY-MM-DD	2020-04-21
	DESIGNED	JT
	PREPARED	JT
	REVIEWED	JS
	APPROVED	TAM

GOLDER

PROJECT NO.

20139596

CONTROL

0002

REV.

FIGURE

3



LEGEND

- BOREHOLE LOCATIPN
- MONITORING WELL LOCATION
- GEOLOGICAL CROSS SECTION LINE
- STUDY AREA

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE.

REFERENCE(S)

BASE DATA - MNR LIO, OBTAINED 2017
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BASE IMAGERY SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRIID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT

Choice Properties Limited Partnership

PROJECT

SUBMISSION OF RECORD OF SITE CONDITION
683 TO 685 WARDEN AVENUE, TORONTO, ONTARIO

TITLE

PHASE TWO SITE PLAN

CONSULTANT	YYYY-MM-DD	2020-04-16
DESIGNED	JT	
PREPARED	JT	
REVIEWED	DS	
APPROVED	TAM	

PROJECT NO. 20139596

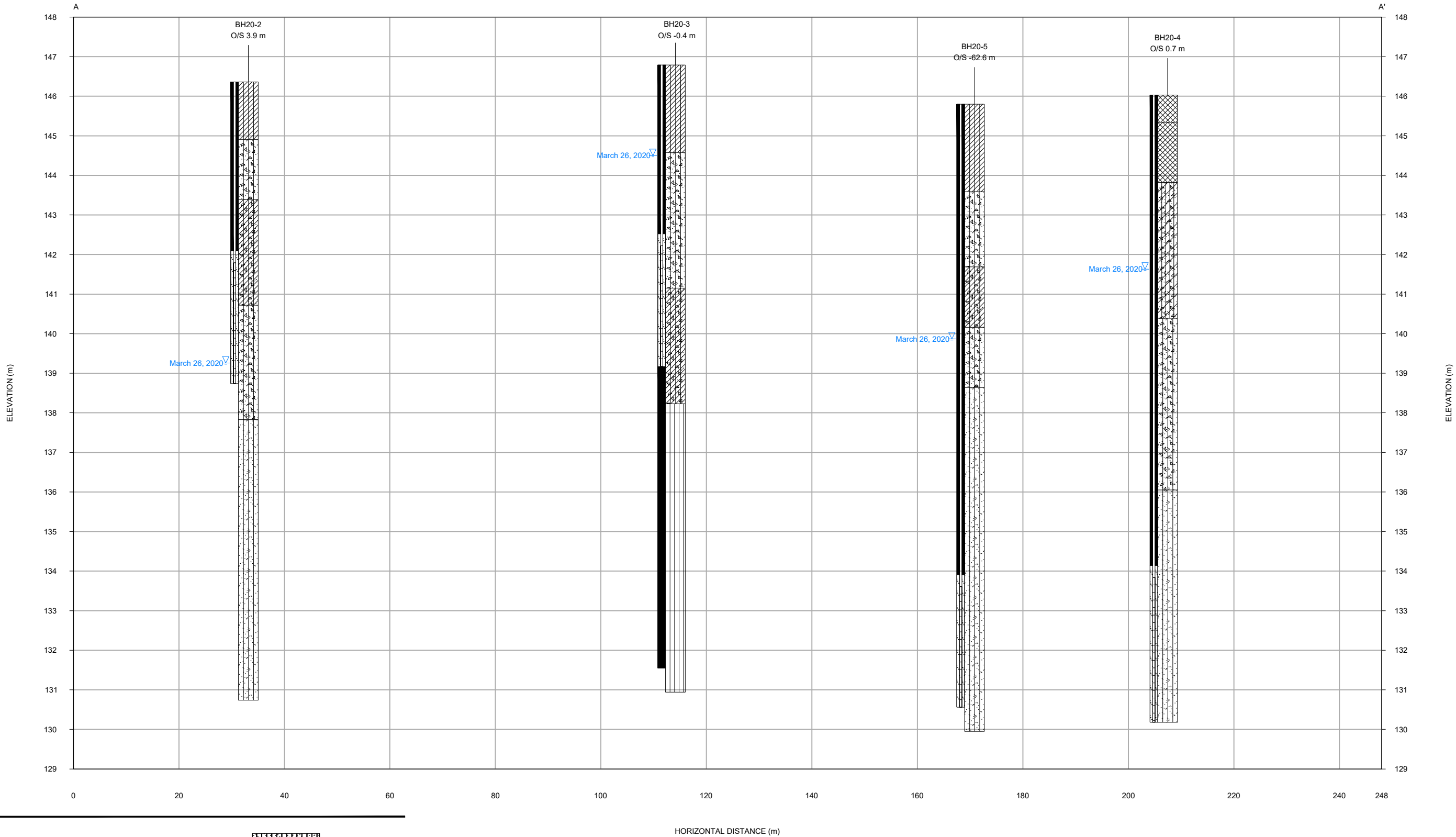
CONTROL 0002

REV.

FIGURE 4

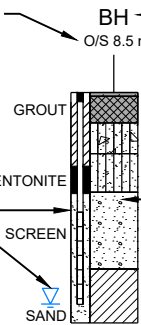
GOLDER

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LEGEND

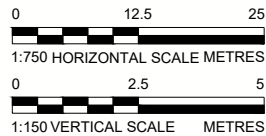
OFFSET FROM PROFILE LINE
+ NORTH OF PROFILE LINE
- SOUTH OF PROFILE LINE



BOREHOLE LABEL
BOREHOLE STRATA SYMBOL

- FILL
- SILT
- SANDY SILT
- SANDY SILT/SILTY SAND TILL
- SILTY CLAY
- SILTY CLAY TILL
- CLAYEY SILT TILL

NOT FOR CONSTRUCTION



CLIENT
Choice Properties Limited Partnership

CONSULTANT



YYYY-MM-DD	2020-04-20
DESIGNED	
PREPARED	MK
REVIEWED	DS
APPROVED	TAM

PROJECT
SUBMISSION OF RECPRD OF SITE CONDITION
683 TO 685 WARDEN AVENUE TORONTO
ONTARIO

TITLE
CROSS SECTION A-A'

PROJECT NO.
20139596

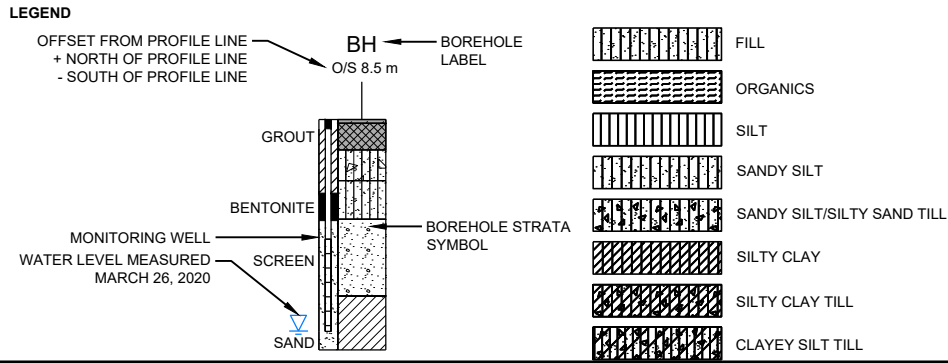
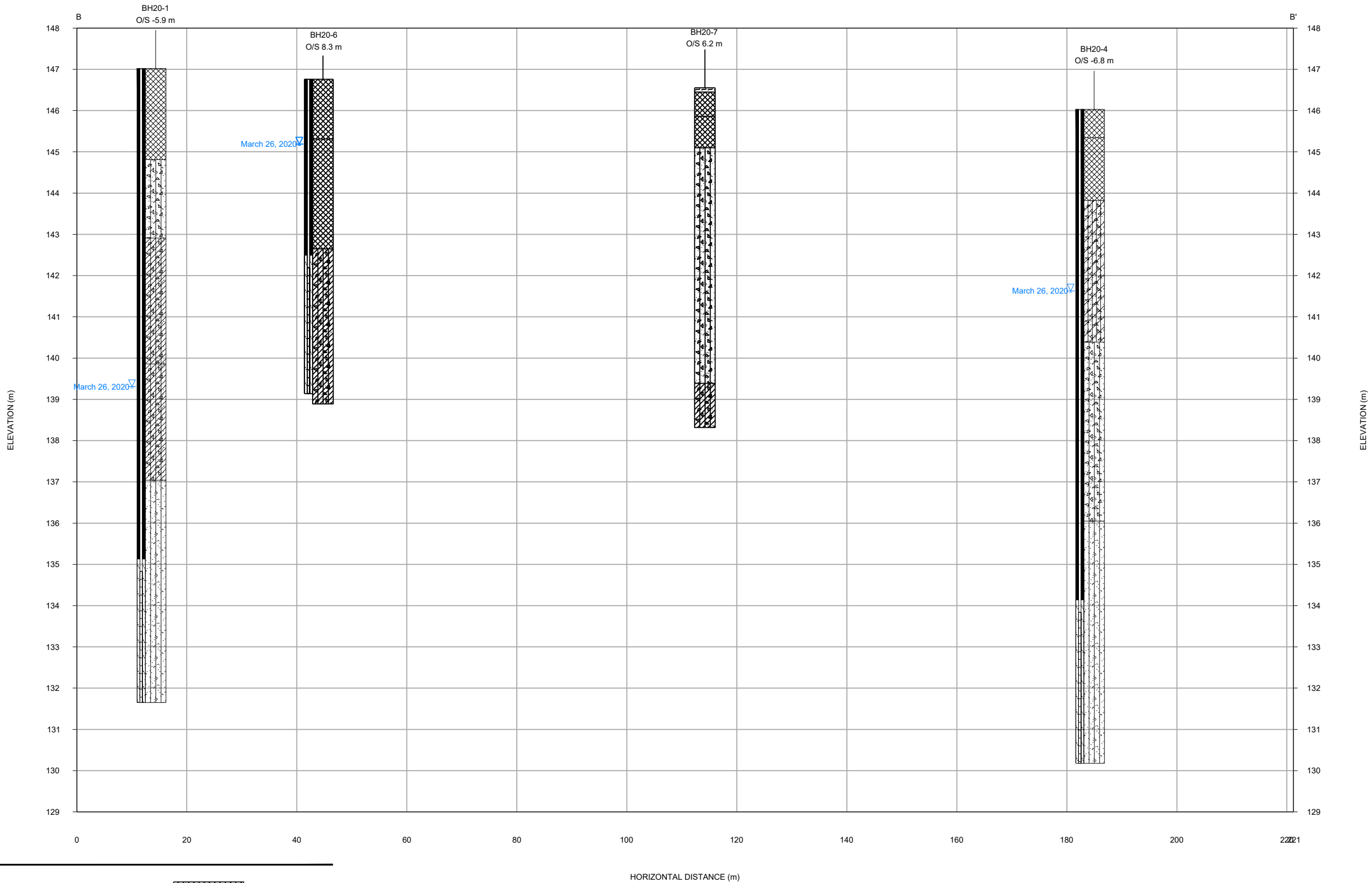
CONTROL

REV.

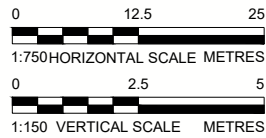
FIGURE
5A

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

Path: \\golder\golder\allMessages\GIS\Clients\Choice_Properties\Carborough - Phase II - ESSA | File Name: 20139596-0002-HS-0006.dwg | Last Edited By: jlin Date: 2020-04-20 Time: 5:35:39 PM | Printed By: jlin Date: 2021-06-09 Time: 5:20:32 PM



NOT FOR CONSTRUCTION



CLIENT
Choice Properties Limited Partnership

CONSULTANT



GOLDER
MEMBER OF WSP

YYYY-MM-DD	2020-04-20
DESIGNED	
PREPARED	MK
REVIEWED	DS
APPROVED	TAM

PROJECT
SUBMISSION OF RECPRD OF SITE CONDITION
683 TO 685 WARDEN AVENUE TORONTO,
ONTARIO

TITLE
CROSS SECTION B-B'

PROJECT NO.
20139596

CONTROL








REV.

FIGURE
5B

25 mm
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B



- LEGEND**

 -  BOREHOLE LOCATIPN
 -  MONITORING WELL LOCATION
 -  GEOLOGICAL CROSS SECTION LINE
 -  GROUNDWATER CONTOURS (M)
 -  INFERRED GROUNDWATER FLOW DIRECTION
 -  STUDY AREA
 -  GROUNDWATER ELEVATION (masl)

NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE.
2. masl = GROUNDWATER ELEVATION

REFERENCE(S)
BASE DATA - MNR LIO, OBTAINED 2017
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BASE IMAGERY SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AERGRID, IGN, AND THE GIS USER COMMUNITY
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT	CHOICE PROPERTIES REIT
PROJECT	SUBMISSION OF RECORD OF SITE CONDITION 683 TO 685 WARDEN AVENUE, TORONTO, ONTARIO
TITLE	GROUNDWATER ELEVATIONS – MARCH 26, 2020

CONSULTANT	YYYY-MM-DD	2020-04-16
 GOLDER	DESIGNED	JT
	PREPARED	JT
	REVIEWED	DS
	APPROVED	TAM

PROJECT NO.	CONTROL	REV.	FIGURE
20139596	0002		6

APPENDIX A

Legal Plan of Survey

PLAN OF SURVEY WITH TOPOGRAPHY OF
**PART OF LOT 32
CONCESSION B**
CITY OF TORONTO
(FORMERLY CITY OF SCARBOROUGH)

SCALE 1 : 500
10 5 0 10 20 30 40 50 metres

SPEIGHT, VAN NOSTRAND & GIBSON LIMITED
ONTARIO LAND SURVEYORS
2005

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ELEVATION NOTE
ELEVATIONS ARE GEODETIC AND ARE DERIVED FROM THE CITY OF TORONTO
BENCH MARK No. MT 71
LOCATION :
WARDEN AVENUE, SOUTH OF ST. CLAIR AVENUE EAST SIDE. IN WEST FACE
OF EAST BRIDGE ABUTMENT OF RAILWAY OVERPASS ON WARDEN AVENUE
SOUTH OF ST. CLAIR AVENUE, 0.18 METRES NORTH OF SOUTH WEST
CORNER AND 0.27 METRES ABOVE SIDEWALK.

PUBLISHED ELEVATION = 147.557 metres.

BEARING NOTE
BEARINGS HEREON ARE ASTROMOMIC AND ARE REFERRED TO THE EASTERLY
LIMIT OF WARDEN AVENUE AS SHOWN ON PLAN 66R-5133
HAVING A BEARING OF N16°57'00"W

- LEGEND**
- | DENOTES | |
|---------|---------------------------------------|
| WIT | SURVEY MONUMENT FOUND |
| SIB | SURVEY MONUMENT PLANTED |
| SSIB | WITNESS MONUMENT |
| IB | STANDARD IRON BAR |
| CC | SHORT STANDARD IRON BAR |
| OU | IRON BAR |
| CC | OUT CROSS |
| OU | N.S.E.W |
| OU | NORTH, SOUTH, EAST, WEST |
| OU | ORIGIN UNKNOWN |
| OU | GEORGE GLENDAY |
| OU | METRO TRAFFIC AND ROADS |
| OU | PURCELL T. MURRAY |
| OU | MARSHALL MACKLIN MONAGHAN ONTARIO LTD |
| OU | REFERENCE PLAN 66R-5133 |
| OU | PLAN 66R-21253 |
| OU | MANHOLE |
| OU | SEWER MANHOLE |
| OU | WATER MANHOLE |
| OU | HYDRO MANHOLE |
| OU | BELL MANHOLE |
| OU | CATCH BASIN |
| OU | FIRE HYDRANT |
| OU | WATER VALVE |
| OU | GAS VALVE |
| OU | HAND WELL |
| OU | CONCRETE HYDRO POLE |
| OU | WOODEN HYDRO POLE |
| OU | CONCRETE LIGHT STANDARD |
| OU | METAL LIGHT STANDARD |
| OU | GUTTER |
| OU | AIR CONDITIONER |
| OU | BOLLARD |
| OU | SIAMSESE CONNECTION |
| OU | AUTOMATIC TRAFFIC SIGNAL |
| OU | IRRIGATION CONTROL VALVE |
| OU | GAS METER |
| OU | DECIDUOUS TREE |
| OU | CONIFEROUS TREE |
| OU | ELEVATION ON THE GROUND |
| OU | ELEVATION ON THE TOP OF WALL |
| OU | CONCRETE |
| OU | GRAVEL |
| OU | BRICK |
| OU | BRICK WALL |
| OU | CONCRETE WALL |

SURVEYOR'S CERTIFICATE

I CERTIFY THAT :
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYOR'S ACT,
THE SURVEYORS ACT, THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON DECEMBER 19, 2005

DATE : , 2005

D. A. WILTON
ONTARIO LAND SURVEYOR

SPEIGHT, VAN NOSTRAND & GIBSON LIMITED
ONTARIO LAND SURVEYORS
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E-Mail : toronto@svng.on.ca

DRAWN : D.G.	FILE NAME : A0510409.DWG
CHECKED : D. A. W.	PLOT SCALE : MET. 1=0.50
JOB No. : 051-0409	PLOTTED :
REF. No. : 64-Con B Scarborough	UPDATED :

64-Con B Scarborough

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

APPENDIX B

Laboratory Certificates of Analysis

CLIENT NAME: GOLDER ASSOCIATES LTD.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 20139596

AGAT WORK ORDER: 20T585542

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor

DATE REPORTED: Apr 13, 2020

PAGES (INCLUDING COVER): 22

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 following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- 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 report shall not be reproduced or distributed, in whole or in part, without the prior written consent of AGAT Laboratories.
- 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 information contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



Certificate of Analysis

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

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

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-17

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION:					BH20-1 SA1	BH20-2 SA1	BH20-3 SA2	BH20-4 SA1	BH20-5 SA2	BH20-6 SA1	BH20-7 SA1
SAMPLE TYPE:					Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:					2020-03-10	2020-03-10	2020-03-11	2020-03-09	2020-03-12	2020-03-09	2020-03-09
Parameter	Unit	G / S: A	G / S: B	RDL	1032218	1032245	1032247	1032250	1032253	1032256	1032259
Antimony	µg/g	7.5	7.5	0.8	<0.8[<A]	<0.8[<A]	<0.8[<A]	<0.8[<A]	<0.8[<A]	<0.8[<A]	<0.8[<A]
Arsenic	µg/g	18	18	1	2[<A]	3[<A]	2[<A]	3[<A]	2[<A]	2[<A]	3[<A]
Barium	µg/g	390	390	2	29[<A]	58[<A]	43[<A]	46[<A]	29[<A]	51[<A]	36[<A]
Beryllium	µg/g	5	5	0.5	<0.5[<A]	0.6[<A]	<0.5[<A]	0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]
Boron	µg/g	120	120	5	<5[<A]	6[<A]	<5[<A]	<5[<A]	<5[<A]	7[<A]	6[<A]
Boron (Hot Water Extractable)	µg/g	1.5	1.5	0.10	<0.10[<A]	0.61[<A]	0.13[<A]	0.72[<A]	0.19[<A]	0.23[<A]	0.19[<A]
Cadmium	µg/g	1.2	1.2	0.5	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]
Chromium	µg/g	160	160	5	10[<A]	21[<A]	17[<A]	17[<A]	12[<A]	14[<A]	13[<A]
Cobalt	µg/g	22	22	0.5	4.1[<A]	8.0[<A]	5.7[<A]	6.4[<A]	4.2[<A]	4.9[<A]	4.8[<A]
Copper	µg/g	180	180	1	8[<A]	16[<A]	12[<A]	11[<A]	10[<A]	9[<A]	11[<A]
Lead	µg/g	120	120	1	4[<A]	13[<A]	8[<A]	10[<A]	5[<A]	5[<A]	14[<A]
Molybdenum	µg/g	6.9	6.9	0.5	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]
Nickel	µg/g	130	130	1	7[<A]	16[<A]	14[<A]	13[<A]	7[<A]	10[<A]	10[<A]
Selenium	µg/g	2.4	2.4	0.4	<0.4[<A]	<0.4[<A]	<0.4[<A]	0.5[<A]	<0.4[<A]	<0.4[<A]	<0.4[<A]
Silver	µg/g	25	25	0.2	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]
Thallium	µg/g	1	1	0.4	<0.4[<A]	<0.4[<A]	<0.4[<A]	<0.4[<A]	<0.4[<A]	<0.4[<A]	<0.4[<A]
Uranium	µg/g	23	23	0.5	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]	<0.5[<A]
Vanadium	µg/g	86	86	1	17[<A]	29[<A]	25[<A]	26[<A]	19[<A]	21[<A]	24[<A]
Zinc	µg/g	340	340	5	19[<A]	50[<A]	35[<A]	41[<A]	26[<A]	26[<A]	78[<A]
Chromium, Hexavalent	µg/g	10	10	0.2	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]	<0.2[<A]
Cyanide, Free	µg/g	0.051	0.051	0.040	<0.040[<A]	<0.040[<A]	<0.040[<A]	<0.040[<A]	<0.040[<A]	<0.040[<A]	<0.040[<A]
Mercury	µg/g	1.8	1.8	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
Electrical Conductivity (2:1)	mS/cm	0.7	0.7	0.005	0.118[<A]	0.734[>B]	0.437[<A]	0.292[<A]	0.303[<A]	0.187[<A]	0.189[<A]
Sodium Adsorption Ratio	NA	5	5	NA	0.256[<A]	4.81[<A]	2.43[<A]	2.01[<A]	1.96[<A]	0.129[<A]	0.180[<A]
pH, 2:1 CaCl2 Extraction	pH Units			NA	7.73	8.62	7.80	7.38	7.65	7.79	7.68

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
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FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-17

DATE REPORTED: 2020-04-13

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
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.

1032218-1032259 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:



Certificate of Analysis

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

5835 COOPERS AVENUE
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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-17

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION:					BH20-1 SA6	BH20-2 SA4	BH20-3 SA7	BH20-4 SA6	BH20-5 SA3	BH20-6 SA3	BH20-7 SA3
SAMPLE TYPE:					Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:					2020-03-10	2020-03-10	2020-03-11	2020-03-09	2020-03-12	2020-03-09	2020-03-09
Parameter	Unit	G / S: A	G / S: B	RDL	1032232	1032246	1032249	1032252	1032255	1032257	1032260
Naphthalene	µg/g	0.75	0.75	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Acenaphthylene	µg/g	0.17	0.17	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Acenaphthene	µg/g	29	58	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Fluorene	µg/g	69	69	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Phenanthrene	µg/g	7.8	7.8	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Anthracene	µg/g	0.74	0.74	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Fluoranthene	µg/g	0.69	0.69	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Pyrene	µg/g	78	78	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Benz(a)anthracene	µg/g	0.63	0.63	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Chrysene	µg/g	7.8	7.8	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Benzo(b)fluoranthene	µg/g	0.78	0.78	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Benzo(k)fluoranthene	µg/g	0.78	0.78	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Benzo(a)pyrene	µg/g	0.3	0.3	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Indeno(1,2,3-cd)pyrene	µg/g	0.48	0.48	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Dibenz(a,h)anthracene	µg/g	0.1	0.1	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Benzo(g,h,i)perylene	µg/g	7.8	7.8	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
2-and 1-methyl Naphthalene	µg/g	3.4	3.4	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Moisture Content	%			0.1	11.5	11.4	10.7	8.0	15.1	15.4	10.6
Surrogate	Unit	Acceptable Limits									
Naphthalene-d8	%		50-140		99	111	104	102	100	100	108
Acenaphthene-d10	%		50-140		108	109	111	112	112	107	118
Chrysene-d12	%		50-140		108	110	107	114	112	107	105

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
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.

1032232-1032260 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-17

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION: DUP 1					
SAMPLE TYPE: Soil					
DATE SAMPLED: 2020-03-09					
Parameter	Unit	G / S: A	G / S: B	RDL	1032394
F1 (C6 to C10)	µg/g	65	65	5	<5[<A]
F1 (C6 to C10) minus BTEX	µg/g	65	65	5	<5[<A]
F2 (C10 to C16)	µg/g	150	150	10	<10[<A]
F3 (C16 to C34)	µg/g	1300	1300	50	<50[<A]
F4 (C34 to C50)	µg/g	5600	5600	50	<50[<A]
Gravimetric Heavy Hydrocarbons	µg/g	5600	5600	50	NA[<A]
Moisture Content	%			0.1	10.3
Surrogate	Unit	Acceptable Limits			
Terphenyl	%	60-140		119	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
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.

1032394 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 C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-17

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION:					BH20-1 SA6	BH20-2 SA4	BH20-3 SA7	BH20-4 SA6	BH20-5 SA3	BH20-6 SA3	BH20-7 SA3
SAMPLE TYPE:					Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:					2020-03-10	2020-03-10	2020-03-11	2020-03-09	2020-03-12	2020-03-09	2020-03-09
Parameter	Unit	G / S: A	G / S: B	RDL	1032232	1032246	1032249	1032252	1032255	1032257	1032260
F1 (C6 to C10)	µg/g	65	65	5	<5[<A]	<5[<A]	<5[<A]	<5[<A]	<5[<A]	9[<A]	<5[<A]
F1 (C6 to C10) minus BTEX	µg/g	65	65	5	<5[<A]	<5[<A]	<5[<A]	<5[<A]	<5[<A]	9[<A]	<5[<A]
F2 (C10 to C16)	µg/g	150	150	10	13[<A]	<10[<A]	<10[<A]	<10[<A]	<10[<A]	<10[<A]	<10[<A]
F2 (C10 to C16) minus Naphthalene	µg/g			10	13	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	1300	1300	50	71[<A]	<50[<A]	<50[<A]	<50[<A]	<50[<A]	<50[<A]	<50[<A]
F3 (C16 to C34) minus PAHs	µg/g			50	71	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	5600	5600	50	<50[<A]	<50[<A]	<50[<A]	<50[<A]	<50[<A]	<50[<A]	<50[<A]
Gravimetric Heavy Hydrocarbons	µg/g	5600	5600	50	NA[<A]	NA[<A]	NA[<A]	NA[<A]	NA[<A]	NA[<A]	NA[<A]
Moisture Content	%			0.1	11.5	11.4	10.7	8.0	15.1	15.4	10.6
Surrogate	Unit	Acceptable Limits									
Terphenyl	%	60-140									
					110	91	79	86	111	110	108

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
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.

1032232-1032260 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 C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-17

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION:					BH20-1 SA6	BH20-2 SA4	BH20-3 SA7	BH20-4 SA6	BH20-5 SA3	BH20-6 SA3	BH20-7 SA3
SAMPLE TYPE:					Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:					2020-03-10	2020-03-10	2020-03-11	2020-03-09	2020-03-12	2020-03-09	2020-03-09
Parameter	Unit	G / S: A	G / S: B	RDL	1032232	1032246	1032249	1032252	1032255	1032257	1032260
Dichlorodifluoromethane	µg/g	25	25	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Vinyl Chloride	ug/g	0.022	0.022	0.02	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]
Bromomethane	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Trichlorofluoromethane	ug/g	5.8	5.8	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Acetone	ug/g	28	28	0.50	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]
1,1-Dichloroethylene	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Methylene Chloride	ug/g	0.96	0.96	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Trans- 1,2-Dichloroethylene	ug/g	0.75	0.75	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Methyl tert-butyl Ether	ug/g	1.4	1.4	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
1,1-Dichloroethane	ug/g	0.6	11	0.02	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]
Methyl Ethyl Ketone	ug/g	44	44	0.50	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]
Cis- 1,2-Dichloroethylene	ug/g	2.5	30	0.02	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]
Chloroform	ug/g	0.18	0.18	0.04	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]
1,2-Dichloroethane	ug/g	0.05	0.05	0.03	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]
1,1,1-Trichloroethane	ug/g	3.4	3.4	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Carbon Tetrachloride	ug/g	0.12	0.12	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Benzene	ug/g	0.17	0.17	0.02	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]	<0.02[<A]
1,2-Dichloropropane	ug/g	0.085	0.085	0.03	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]
Trichloroethylene	ug/g	0.52	0.52	0.03	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]	<0.03[<A]
Bromodichloromethane	ug/g	1.9	13	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Methyl Isobutyl Ketone	ug/g	4.3	4.3	0.50	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]	<0.50[<A]
1,1,1,2-Trichloroethane	ug/g	0.05	0.05	0.04	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]
Toluene	ug/g	6	6	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Dibromochloromethane	ug/g	2.9	9.4	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Ethylene Dibromide	ug/g	0.05	0.05	0.04	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]
Tetrachloroethylene	ug/g	2.3	2.3	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.05	0.04	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]
Chlorobenzene	ug/g	2.7	2.7	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Ethylbenzene	ug/g	1.6	15	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
m & p-Xylene	ug/g			0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

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CLIENT NAME: GOLDER ASSOCIATES LTD.

SAMPLING SITE:

ATTENTION TO: Daniel Stabile

SAMPLED BY:

O. Reg. 153(511) - VOCs (Soil)											
DATE RECEIVED: 2020-03-17						DATE REPORTED: 2020-04-13					
SAMPLE DESCRIPTION:				BH20-1 SA6	BH20-2 SA4	BH20-3 SA7	BH20-4 SA6	BH20-5 SA3	BH20-6 SA3	BH20-7 SA3	
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	
DATE SAMPLED:				2020-03-10	2020-03-10	2020-03-11	2020-03-09	2020-03-12	2020-03-09	2020-03-09	
Parameter	Unit	G / S: A	G / S: B	RDL	1032232	1032246	1032249	1032252	1032255	1032257	1032260
Bromoform	ug/g	0.26	0.26	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Styrene	ug/g	2.2	2.2	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
o-Xylene	ug/g			0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	6	6	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
1,4-Dichlorobenzene	ug/g	0.097	0.097	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
1,2-Dichlorobenzene	ug/g	1.7	4.3	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Xylenes (Total)	ug/g	25	25	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
1,3-Dichloropropene (Cis + Trans)	µg/g	0.081	0.083	0.04	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]	<0.04[<A]
n-Hexane	µg/g	34	34	0.05	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]	<0.05[<A]
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery		50-140		102	102	103	102	103	103	103
4-Bromofluorobenzene	% Recovery		50-140		84	84	85	85	83	91	88

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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-17

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION: DUP 1					
SAMPLE TYPE: Soil					
DATE SAMPLED: 2020-03-09					
Parameter	Unit	G / S: A	G / S: B	RDL	1032394
Dichlorodifluoromethane	µg/g	25	25	0.05	<0.05[<A]
Vinyl Chloride	ug/g	0.022	0.022	0.02	<0.02[<A]
Bromomethane	ug/g	0.05	0.05	0.05	<0.05[<A]
Trichlorofluoromethane	ug/g	5.8	5.8	0.05	<0.05[<A]
Acetone	ug/g	28	28	0.50	<0.50[<A]
1,1-Dichloroethylene	ug/g	0.05	0.05	0.05	<0.05[<A]
Methylene Chloride	ug/g	0.96	0.96	0.05	<0.05[<A]
Trans- 1,2-Dichloroethylene	ug/g	0.75	0.75	0.05	<0.05[<A]
Methyl tert-butyl Ether	ug/g	1.4	1.4	0.05	<0.05[<A]
1,1-Dichloroethane	ug/g	0.6	11	0.02	<0.02[<A]
Methyl Ethyl Ketone	ug/g	44	44	0.50	<0.50[<A]
Cis- 1,2-Dichloroethylene	ug/g	2.5	30	0.02	<0.02[<A]
Chloroform	ug/g	0.18	0.18	0.04	<0.04[<A]
1,2-Dichloroethane	ug/g	0.05	0.05	0.03	<0.03[<A]
1,1,1-Trichloroethane	ug/g	3.4	3.4	0.05	<0.05[<A]
Carbon Tetrachloride	ug/g	0.12	0.12	0.05	<0.05[<A]
Benzene	ug/g	0.17	0.17	0.02	<0.02[<A]
1,2-Dichloropropane	ug/g	0.085	0.085	0.03	<0.03[<A]
Trichloroethylene	ug/g	0.52	0.52	0.03	<0.03[<A]
Bromodichloromethane	ug/g	1.9	13	0.05	<0.05[<A]
Methyl Isobutyl Ketone	ug/g	4.3	4.3	0.50	<0.50[<A]
1,1,2-Trichloroethane	ug/g	0.05	0.05	0.04	<0.04[<A]
Toluene	ug/g	6	6	0.05	<0.05[<A]
Dibromochloromethane	ug/g	2.9	9.4	0.05	<0.05[<A]
Ethylene Dibromide	ug/g	0.05	0.05	0.04	<0.04[<A]
Tetrachloroethylene	ug/g	2.3	2.3	0.05	<0.05[<A]
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.05	0.04	<0.04[<A]
Chlorobenzene	ug/g	2.7	2.7	0.05	<0.05[<A]
Ethylbenzene	ug/g	1.6	15	0.05	<0.05[<A]
m & p-Xylene	ug/g			0.05	<0.05

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PROJECT: 20139596

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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-17

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION: DUP 1					
SAMPLE TYPE: Soil					
DATE SAMPLED: 2020-03-09					
Parameter	Unit	G / S: A	G / S: B	RDL	1032394
Bromoform	ug/g	0.26	0.26	0.05	<0.05[<A]
Styrene	ug/g	2.2	2.2	0.05	<0.05[<A]
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	0.05	<0.05[<A]
o-Xylene	ug/g			0.05	<0.05
1,3-Dichlorobenzene	ug/g	6	6	0.05	<0.05[<A]
1,4-Dichlorobenzene	ug/g	0.097	0.097	0.05	<0.05[<A]
1,2-Dichlorobenzene	ug/g	1.7	4.3	0.05	<0.05[<A]
Xylenes (Total)	ug/g	25	25	0.05	<0.05[<A]
1,3-Dichloropropene (Cis + Trans)	µg/g	0.081	0.083	0.04	<0.04[<A]
n-Hexane	µg/g	34	34	0.05	<0.05[<A]
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery		50-140		103
4-Bromofluorobenzene	% Recovery		50-140		84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
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.

1032232-1032394 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.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

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CLIENT NAME: GOLDER ASSOCIATES LTD.

SAMPLING SITE:

ATTENTION TO: Daniel Stabile

SAMPLED BY:

Total PCBs (soil)					
DATE RECEIVED: 2020-03-17			DATE REPORTED: 2020-04-13		
		SAMPLE DESCRIPTION:		BH20-6 SA1	
		SAMPLE TYPE:		Soil	
		DATE SAMPLED:		2020-03-09	
Parameter	Unit	G / S: A	G / S: B	RDL	1032256
PCBs	µg/g	0.35	0.35	0.1	<0.1[<A]
Moisture Content	%			0.1	10.7
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	60-130		84	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
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.

1032256 Results are based on the dry weight of soil extracted.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



AGAT Laboratories

Guideline Violation

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

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SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
1032245	BH20-2 SA1	ON T2 S RPI MFT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	0.734
1032245	BH20-2 SA1	ON T3 S RPI MFT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	0.734

Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

PROJECT: 20139596

SAMPLING SITE:

AGAT WORK ORDER: 20T585542

ATTENTION TO: Daniel Stabile

SAMPLED BY:

Soil Analysis

RPT Date: Apr 13, 2020			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	1033425		<0.8	<0.8	NA	< 0.8	138%	70%	130%	105%	80%	120%	93%	70%	130%
Arsenic	1033425		3	3	NA	< 1	113%	70%	130%	102%	80%	120%	104%	70%	130%
Barium	1033425		66	68	3.0%	< 2	103%	70%	130%	99%	80%	120%	98%	70%	130%
Beryllium	1033425		<0.5	<0.5	NA	< 0.5	99%	70%	130%	110%	80%	120%	92%	70%	130%
Boron	1033425		7	7	NA	< 5	79%	70%	130%	102%	80%	120%	73%	70%	130%
Boron (Hot Water Extractable)	1032218	1032218	<0.10	<0.10	NA	< 0.10	94%	60%	140%	99%	70%	130%	96%	60%	140%
Cadmium	1033425		<0.5	<0.5	NA	< 0.5	112%	70%	130%	101%	80%	120%	101%	70%	130%
Chromium	1033425		17	17	NA	< 5	101%	70%	130%	98%	80%	120%	86%	70%	130%
Cobalt	1033425		5.8	5.9	1.7%	< 0.5	96%	70%	130%	99%	80%	120%	94%	70%	130%
Copper	1033425		12	12	0.0%	< 1	102%	70%	130%	97%	80%	120%	82%	70%	130%
Lead	1033425		8	8	0.0%	< 1	108%	70%	130%	92%	80%	120%	88%	70%	130%
Molybdenum	1033425		<0.5	<0.5	NA	< 0.5	98%	70%	130%	100%	80%	120%	84%	70%	130%
Nickel	1033425		12	12	0.0%	< 1	93%	70%	130%	100%	80%	120%	90%	70%	130%
Selenium	1033425		<0.4	<0.4	NA	< 0.4	123%	70%	130%	101%	80%	120%	100%	70%	130%
Silver	1033425		<0.2	<0.2	NA	< 0.2	96%	70%	130%	97%	80%	120%	90%	70%	130%
Thallium	1033425		<0.4	<0.4	NA	< 0.4	93%	70%	130%	101%	80%	120%	100%	70%	130%
Uranium	1033425		<0.5	<0.5	NA	< 0.5	98%	70%	130%	100%	80%	120%	105%	70%	130%
Vanadium	1033425		25	26	3.9%	< 1	99%	70%	130%	97%	80%	120%	87%	70%	130%
Zinc	1033425		38	39	2.6%	< 5	93%	70%	130%	101%	80%	120%	91%	70%	130%
Chromium, Hexavalent	1037393		< 0.2	< 0.2	NA	< 0.2	97%	70%	130%	86%	80%	120%	82%	70%	130%
Cyanide, Free	1033694		<0.040	<0.040	NA	< 0.040	91%	70%	130%	100%	80%	120%	97%	70%	130%
Mercury	1033425		<0.10	<0.10	NA	< 0.10	117%	70%	130%	107%	80%	120%	111%	70%	130%
Electrical Conductivity (2:1)	1032218	1032218	0.118	0.118	0.0%	< 0.005	111%	80%	120%	NA			NA		
Sodium Adsorption Ratio	1032218	1032218	0.256	0.260	1.6%	NA	NA			NA			NA		
pH, 2:1 CaCl2 Extraction	1032610		6.53	6.61	1.2%	NA	101%	80%	120%	NA			NA		

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

QA Qualifier for metals - Antimony: For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Certified By:




Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Apr 13, 2020			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total PCBs (soil)															
PCBs	1025476		< 0.1	< 0.1	NA	< 0.1	98%	60%	140%	100%	60%	140%	93%	60%	140%
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	1035936		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	84%	50%	140%	72%	50%	140%
Vinyl Chloride	1035936		< 0.02	< 0.02	NA	< 0.02	93%	50%	140%	100%	50%	140%	93%	50%	140%
Bromomethane	1035936		< 0.05	< 0.05	NA	< 0.05	74%	50%	140%	71%	50%	140%	86%	50%	140%
Trichlorofluoromethane	1035936		< 0.05	< 0.05	NA	< 0.05	83%	50%	140%	96%	50%	140%	83%	50%	140%
Acetone	1035936		< 0.50	< 0.50	NA	< 0.50	102%	50%	140%	97%	50%	140%	91%	50%	140%
1,1-Dichloroethylene	1035936		< 0.05	< 0.05	NA	< 0.05	115%	50%	140%	112%	60%	130%	73%	50%	140%
Methylene Chloride	1035936		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	113%	60%	130%	111%	50%	140%
Trans- 1,2-Dichloroethylene	1035936		< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	93%	60%	130%	110%	50%	140%
Methyl tert-butyl Ether	1035936		< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	97%	60%	130%	106%	50%	140%
1,1-Dichloroethane	1035936		< 0.02	< 0.02	NA	< 0.02	113%	50%	140%	106%	60%	130%	111%	50%	140%
Methyl Ethyl Ketone	1035936		< 0.50	< 0.50	NA	< 0.50	82%	50%	140%	99%	50%	140%	89%	50%	140%
Cis- 1,2-Dichloroethylene	1035936		< 0.02	< 0.02	NA	< 0.02	99%	50%	140%	106%	60%	130%	115%	50%	140%
Chloroform	1035936		< 0.04	< 0.04	NA	< 0.04	88%	50%	140%	93%	60%	130%	118%	50%	140%
1,2-Dichloroethane	1035936		< 0.03	< 0.03	NA	< 0.03	112%	50%	140%	107%	60%	130%	94%	50%	140%
1,1,1-Trichloroethane	1035936		< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	115%	60%	130%	90%	50%	140%
Carbon Tetrachloride	1035936		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	87%	60%	130%	106%	50%	140%
Benzene	1035936		< 0.02	< 0.02	NA	< 0.02	78%	50%	140%	93%	60%	130%	78%	50%	140%
1,2-Dichloropropane	1035936		< 0.03	< 0.03	NA	< 0.03	85%	50%	140%	78%	60%	130%	72%	50%	140%
Trichloroethylene	1035936		< 0.03	< 0.03	NA	< 0.03	103%	50%	140%	99%	60%	130%	100%	50%	140%
Bromodichloromethane	1035936		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	79%	60%	130%	97%	50%	140%
Methyl Isobutyl Ketone	1035936		< 0.50	< 0.50	NA	< 0.50	104%	50%	140%	87%	50%	140%	93%	50%	140%
1,1,2-Trichloroethane	1035936		< 0.04	< 0.04	NA	< 0.04	105%	50%	140%	105%	60%	130%	98%	50%	140%
Toluene	1035936		< 0.05	< 0.05	NA	< 0.05	111%	50%	140%	107%	60%	130%	100%	50%	140%
Dibromochloromethane	1035936		< 0.05	< 0.05	NA	< 0.05	83%	50%	140%	73%	60%	130%	95%	50%	140%
Ethylene Dibromide	1035936		< 0.04	< 0.04	NA	< 0.04	94%	50%	140%	98%	60%	130%	117%	50%	140%
Tetrachloroethylene	1035936		< 0.05	< 0.05	NA	< 0.05	117%	50%	140%	113%	60%	130%	87%	50%	140%
1,1,1,2-Tetrachloroethane	1035936		< 0.04	< 0.04	NA	< 0.04	104%	50%	140%	100%	60%	130%	112%	50%	140%
Chlorobenzene	1035936		< 0.05	< 0.05	NA	< 0.05	116%	50%	140%	119%	60%	130%	84%	50%	140%
Ethylbenzene	1035936		< 0.05	< 0.05	NA	< 0.05	107%	50%	140%	110%	60%	130%	106%	50%	140%
m & p-Xylene	1035936		< 0.05	< 0.05	NA	< 0.05	110%	50%	140%	107%	60%	130%	96%	50%	140%
Bromoform	1035936		< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	81%	60%	130%	100%	50%	140%
Styrene	1035936		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	104%	60%	130%	70%	50%	140%
1,1,2,2-Tetrachloroethane	1035936		< 0.05	< 0.05	NA	< 0.05	94%	50%	140%	103%	60%	130%	86%	50%	140%
o-Xylene	1035936		< 0.05	< 0.05	NA	< 0.05	112%	50%	140%	113%	60%	130%	79%	50%	140%
1,3-Dichlorobenzene	1035936		< 0.05	< 0.05	NA	< 0.05	97%	50%	140%	109%	60%	130%	105%	50%	140%
1,4-Dichlorobenzene	1035936		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	105%	60%	130%	94%	50%	140%

Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

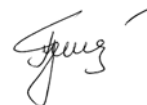
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Apr 13, 2020			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
1,2-Dichlorobenzene	1035936		< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	88%	60%	130%	89%	50%	140%
1,3-Dichloropropene (Cis + Trans)	1035936		< 0.04	< 0.04	NA	< 0.04	102%	50%	140%	108%	60%	130%	89%	50%	140%
n-Hexane	1035936		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	94%	60%	130%	103%	50%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	1014992		<0.05	<0.05	NA	< 0.05	116%	50%	140%	97%	50%	140%	101%	50%	140%
Acenaphthylene	1014992		<0.05	<0.05	NA	< 0.05	112%	50%	140%	96%	50%	140%	99%	50%	140%
Acenaphthene	1014992		<0.05	<0.05	NA	< 0.05	119%	50%	140%	96%	50%	140%	96%	50%	140%
Fluorene	1014992		<0.05	<0.05	NA	< 0.05	114%	50%	140%	97%	50%	140%	95%	50%	140%
Phenanthrene	1014992		<0.05	<0.05	NA	< 0.05	106%	50%	140%	95%	50%	140%	91%	50%	140%
Anthracene	1014992		<0.05	<0.05	NA	< 0.05	101%	50%	140%	86%	50%	140%	84%	50%	140%
Fluoranthene	1014992		<0.05	<0.05	NA	< 0.05	112%	50%	140%	95%	50%	140%	92%	50%	140%
Pyrene	1014992		<0.05	<0.05	NA	< 0.05	111%	50%	140%	96%	50%	140%	93%	50%	140%
Benz(a)anthracene	1014992		<0.05	<0.05	NA	< 0.05	110%	50%	140%	82%	50%	140%	83%	50%	140%
Chrysene	1014992		<0.05	<0.05	NA	< 0.05	119%	50%	140%	97%	50%	140%	95%	50%	140%
Benzo(b)fluoranthene	1014992		<0.05	<0.05	NA	< 0.05	99%	50%	140%	92%	50%	140%	74%	50%	140%
Benzo(k)fluoranthene	1014992		<0.05	<0.05	NA	< 0.05	115%	50%	140%	95%	50%	140%	101%	50%	140%
Benzo(a)pyrene	1014992		<0.05	<0.05	NA	< 0.05	117%	50%	140%	92%	50%	140%	88%	50%	140%
Indeno(1,2,3-cd)pyrene	1014992		<0.05	<0.05	NA	< 0.05	118%	50%	140%	89%	50%	140%	87%	50%	140%
Dibenz(a,h)anthracene	1014992		<0.05	<0.05	NA	< 0.05	111%	50%	140%	85%	50%	140%	89%	50%	140%
Benzo(g,h,i)perylene	1014992		<0.05	<0.05	NA	< 0.05	112%	50%	140%	86%	50%	140%	84%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 to C10)	1032394	1032394	< 5	< 5	NA	< 5	98%	60%	140%	104%	60%	140%	96%	60%	140%
F2 (C10 to C16)	1031462		< 10	< 10	NA	< 10	109%	60%	140%	115%	60%	140%	86%	60%	140%
F3 (C16 to C34)	1031462		< 50	< 50	NA	< 50	104%	60%	140%	116%	60%	140%	87%	60%	140%
F4 (C34 to C50)	1031462		< 50	< 50	NA	< 50	102%	60%	140%	103%	60%	140%	104%	60%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:



QA Violation

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

ATTENTION TO: Daniel Stabile

RPT Date: Apr 13, 2020			REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Sample Description	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
				Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)											
Antimony		BH20-1 SA1	138%	70%	130%	105%	80%	120%	93%	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.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

QA Qualifier for metals - Antimony: For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

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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 Extractable)	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, Free	INOR-93-6052	modified from ON MOECC E3015 and SM 4500-CN- I	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio	INOR-93-6007	McKeague 4.12 & 3.26 & EPA SW-846 6010C	ICP/OES
pH, 2:1 CaCl ₂ Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Moisture Content	ORG-91-5106	Tier 1 Method	BALANCE
Naphthalene-d8	ORG-91-5106	modified from EPA SW-846 3541 & 8270E50	GC/MS
Acenaphthene-d10	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
Chrysene-d12	ORG-91-5106	modified from EPA SW-846 3541 & 8270E	GC/MS
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method, SW846 5035	P&T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method, SW846 5035	P&T GC/FID
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
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
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T585542

PROJECT: 20139596

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
PCBs	ORG-91-5113	modified from EPA SW-846 3541 & 8082	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082	GC/ECD
Moisture Content		Tier 1 method	BALANCE



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)

Report Information:

Company: GOLDER ASSOCIATES LTD.
Contact: DANIEL STABILE
Address: 100 SCOTIA CRT, WHITBY, ON L1N 8Y6
Phone: 905-213-4732 Fax: _____
Reports to be sent to:
1. Email: DSTABILE@GOLDER.COM
2. Email: _____

Project Information:

Project: 20139596
Site Location: 683 WARDEN AVE.
Sampled By: R. PATEL
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: AP-CUSTOMER SERVICE@GOLDER.COM

Regulatory Requirements:

☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04

☐ Sewer Use

☐ Regulation 558

Table 2

☒ Ind/Com

☐ Sanitary

☐ CCME

☒ Res/Park

☐ Storm

☐ Prov. Water Quality Objectives (PWQO)

☐ Agriculture

Region _____
Indicate One

☐ Other

Soil Texture (Check One)

☐ Coarse

☐ MISA

☒ Fine

Indicate One

Is this submission for a
Record of Site Condition?

☐ Yes

☒ No

Report Guideline on
Certificate of Analysis

☒ Yes

☐ No

Sample Matrix Legend

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

Field Filtered - Metals, Hg, CrVI

0. Reg 153

Metals and Inorganics
☐ All Metals ☐ 153 Metals (excl. Hydrides)
☐ Hydride Metals ☒ 153 Metals (incl. Hydrides)

ORPs: ☒ B-HWS ☒ Cl ☒ CN
☒ Cr ☒ EC ☐ FOC ☒ Hg
☒ pH ☒ SAR

Full Metals Scan

Regulation/Custom Metals

Nutrients: ☐ TP ☐ NH₃ ☐ TKN
☐ NO₃ ☐ NO₂ ☐ NO₃+NO₂

Volatiles: ☒ VOC ☒ BTEX ☐ THM

PHCs F1 - F4

ABNs

PAHs

PCBs: ☒ Total ☐ Aroclors

Organochlorine Pesticides

TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ Bi(a)p ☐ PCBs

Sewer Use

Potentially Hazardous or High Concentration (Y/N)

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Metals and Inorganics	ORPs	Nutrients	Volatiles	PHCs F1 - F4	ABNs	PAHs	PCBs: Total	Organochlorine Pesticides	TCLP: M&I	Sewer Use	Potentially Hazardous or High Concentration (Y/N)
BA20-1 SA1	10/3/20	AM	1	SOIL			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>								
BH20-1 SA4		AM	3		ON HOLD					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					
BH20-1 SA6		AM	3							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					
BH20-2 SA1		PM	1				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>								
BH20-2 SA4		PM	3							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					
BH20-3 SA2	11/3/20	AM	1				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>								
BH20-3 SA7		AM	3							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					
BH20-4 SA1	9/3/20	PM	1				<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>								
BH20-4 SA2		PM	3		ON HOLD					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					
BH20-4 SA6			3							<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					
BH20-5 SA2	12/3/20	AM	1				<input checked="" type="checkbox"/>											

Samples Relinquished By (Print Name and Sign): <u>DANIEL STABILE</u>	Date: <u>12/3/20</u>	Time: <u>08:00</u>	Samples Received By (Print Name and Sign): <u>R. PATEL</u>	Date: <u>3/17/20</u>	Time: <u>11:00</u>
Samples Relinquished By (Print Name and Sign): <u>R. PATEL</u>	Date: <u>3/17/20</u>	Time: <u>2:22</u>	Samples Received By (Print Name and Sign): <u>R. PATEL</u>	Date: <u>3/17/20</u>	Time: <u>11:00</u>
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____

Page 1 of 2
Nº: **T101044**



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)

Report Information:

Company: GOLDEN ASSOCIATES LTD.
Contact: DANIEL STABILE
Address: 100 SCOTIA CRT, WILLOW L1N 8K6
ON
Phone: 905-213-4732 Fax: _____
Reports to be sent to:
1. Email: DSTABILE@GOLDEN.COM
2. Email: _____

Project Information:

Project: 2013 9596
Site Location: 683 WILLOW AVE
Sampled By: R. PATEL
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: AP - CUSTOMER SERVICE @ GOLDEN.COM

Regulatory Requirements:

☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04

Table 2 Indicate One

☒ Ind/Com

☒ Res/Park

☐ Agriculture

Soil Texture (Check One)

☐ Coarse

☒ Fine

☐ Sewer Use

☐ Sanitary

☐ Storm

Region _____ Indicate One

☐ MISA

☐ Regulation 558

☐ CCME

☐ 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

Sample Matrix Legend

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

Field Filtered - Metals, Hg, CrVI

0. Reg 153

Metals and Inorganics
☐ All Metals ☐ 153 Metals (exc. Hydrides)
☐ Hydride Metals ☒ 153 Metals (Incl. Hydrides)

OPPs: ☒ AB-HWS ☐ Cl ☒ CN ☒ Hg ☐ FOC ☒ EC ☒ SAR

Full Metals Scan

Regulation/Custom Metals

Nutrients: ☐ TP ☐ NH₃ ☐ TKN
☐ NO₃ ☐ NO₂ ☐ NO₃+NO₂

Volatiles: ☒ VOC ☒ BTEX ☐ THM

PHCs F1 - F4

ABNs

PAHs

PCBs: ☒ Total ☐ Aroclors

Organochlorine Pesticides

TCLP: ☐ M&I ☐ ABNs ☐ B(a)P ☐ PCBs

Sewer Use

Potentially Hazardous or High Concentration (Y/N)

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Metals and Inorganics	OPPs	Full Metals Scan	Regulation/Custom Metals	Nutrients	Volatiles	PHCs F1 - F4	ABNs	PAHs	PCBs	Organochlorine Pesticides	TCLP	Sewer Use	Potentially Hazardous or High Concentration (Y/N)
BH20-5 SA3	12/3/20	Am	3	Soil																
BH20-6 SA1	9/3/20	Am	1					X												
BH20-6 SA3		Pm	3										X	X						
BH20-7 SA1		Pm	1												X					
BH20-7 SA3		Pm	3					X					X	X						
BH20-7 SA5		Am	3										X	X						
DUP 1		Am	3		ON HOLD								X	X						

Samples Relinquished By (Print Name and Sign): <u>DANIEL STABILE</u>	Date: <u>12/3/20</u>	Time: <u>2:00</u>	Samples Received By (Print Name and Sign): <u>R. PATEL</u>	Date: <u>3/17/20</u>	Time: <u>11:08</u>
Samples Relinquished By (Print Name and Sign): <u>DANIEL STABILE</u>	Date: <u>3/17/20</u>	Time: <u>2:00</u>	Samples Received By (Print Name and Sign): <u>R. PATEL</u>	Date: <u>3/17/20</u>	Time: <u>11:08</u>
Samples Relinquished By (Print Name and Sign): <u>DANIEL STABILE</u>	Date: <u>3/17/20</u>	Time: <u>2:00</u>	Samples Received By (Print Name and Sign): <u>R. PATEL</u>	Date: <u>3/17/20</u>	Time: <u>11:08</u>

Page 2 of 2
Nº: **T101037**

CLIENT NAME: GOLDER ASSOCIATES LTD.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 20139596(3000)

AGAT WORK ORDER: 20T588625

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

WATER ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

DATE REPORTED: Apr 13, 2020

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 following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- 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 report shall not be reproduced or distributed, in whole or in part, without the prior written consent of AGAT Laboratories.
- 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 information contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

Certificate of Analysis

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

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

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-27

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION:					MW20-1	MW20-2	MW20-3	MW20-4	MW20-5	MW20-6	DUP1
SAMPLE TYPE:					Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:					2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26
Parameter	Unit	G / S: A	G / S: B	RDL	1053196	1053209	1053210	1053211	1053212	1053213	1053216
Naphthalene	µg/L	11	6400	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Acenaphthylene	µg/L	1	1.8	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Acenaphthene	µg/L	4.1	1700	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Fluorene	µg/L	120	400	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Phenanthrene	µg/L	1	580	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	0.17[<A]	0.20[<A]
Anthracene	µg/L	2.4	2.4	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
Fluoranthene	µg/L	0.41	130	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Pyrene	µg/L	4.1	68	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Benz(a)anthracene	µg/L	1	4.7	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Chrysene	µg/L	0.1	1	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
Benzo(b)fluoranthene	µg/L	0.1	0.75	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
Benzo(k)fluoranthene	µg/L	0.1	0.4	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
Benzo(a)pyrene	µg/L	0.01	0.81	0.01	<0.01[<A]	<0.01[<A]	<0.01[<A]	<0.01[<A]	<0.01[<A]	<0.01[<A]	<0.01[<A]
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.2	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Dibenz(a,h)anthracene	µg/L	0.2	0.52	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Benzo(g,h,i)perylene	µg/L	0.2	0.2	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
2-and 1-methyl Naphthalene	µg/L	3.2	1800	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Surrogate	Unit	Acceptable Limits									
Naphthalene-d8	%	50-140			103	94	97	83	90	82	103
Acenaphthene-d10	%	50-140			112	110	111	118	107	113	106
Chrysene-d12	%	50-140			115	112	113	98	104	96	107

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils

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.

1053196-1053216 Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

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

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-27

DATE REPORTED: 2020-04-13

		SAMPLE DESCRIPTION:			MW20-1	MW20-2	MW20-3	MW20-4	MW20-5	MW20-6	DUP1
		SAMPLE TYPE:			Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:			2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26
Parameter	Unit	G / S: A	G / S: B	RDL	1053196	1053209	1053210	1053211	1053212	1053213	1053216
F1 (C6-C10)	µg/L	750	750	25	<25[<A]	<25[<A]	<25[<A]	<25[<A]	<25[<A]	<25[<A]	<25[<A]
F1 (C6 to C10) minus BTEX	µg/L	750	750	25	<25[<A]	<25[<A]	<25[<A]	<25[<A]	<25[<A]	<25[<A]	<25[<A]
F2 (C10 to C16)	µg/L	150	150	100	<100[<A]	<100[<A]	<100[<A]	<100[<A]	<100[<A]	<100[<A]	<100[<A]
F2 (C10 to C16) minus Naphthalene	µg/L			100	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	500	100	<100[<A]	<100[<A]	<100[<A]	<100[<A]	<100[<A]	190[<A]	170[<A]
F3 (C16 to C34) minus PAHs	µg/L			100	<100	<100	<100	<100	<100	190	170
F4 (C34 to C50)	µg/L	500	500	100	<100[<A]	<100[<A]	<100[<A]	<100[<A]	<100[<A]	<100[<A]	<100[<A]
Gravimetric Heavy Hydrocarbons	µg/L	500	500	500	NA[<A]	NA[<A]	NA[<A]	NA[<A]	NA[<A]	NA[<A]	NA[<A]
Surrogate	Unit	Acceptable Limits									
Terphenyl	%	60-140			105	102	129	111	131	135	95

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
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.

1053196-1053216 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 C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1/BTEX (Water)

DATE RECEIVED: 2020-03-27

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION:					Field Blank	Trip Blank
SAMPLE TYPE:					Water	Water
DATE SAMPLED:					2020-03-26	2020-03-26
Parameter	Unit	G / S: A	G / S: B	RDL	1053217	1053219
F1 (C6-C10)	µg/L	750	750	25	<25[<A]	<25[<A]
F1 (C6 to C10) minus BTEX	µg/L	750	750	25	<25[<A]	<25[<A]

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
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.

1053217-1053219 The C6-C10 fraction is calculated using Toluene response factor.
Total C6-C10 results are corrected for BTEX contributions.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
Extraction and holding times were met for this sample.
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-27

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION:					MW20-1	MW20-2	MW20-3	MW20-4	MW20-5	MW20-6	DUP1
SAMPLE TYPE:					Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:					2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26
Parameter	Unit	G / S: A	G / S: B	RDL	1053196	1053209	1053210	1053211	1053212	1053213	1053216
Dichlorodifluoromethane	µg/L	590	4400	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Vinyl Chloride	µg/L	1.7	1.7	0.17	<0.17[<A]	<0.17[<A]	<0.17[<A]	<0.17[<A]	<0.17[<A]	<0.17[<A]	<0.17[<A]
Bromomethane	µg/L	0.89	56	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Trichlorofluoromethane	µg/L	150	2500	0.40	<0.40[<A]	<0.40[<A]	<0.40[<A]	<0.40[<A]	<0.40[<A]	<0.40[<A]	<0.40[<A]
Acetone	µg/L	2700	130000	1.0	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]
1,1-Dichloroethylene	µg/L	14	17	0.30	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]
Methylene Chloride	µg/L	50	5500	0.30	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]
trans- 1,2-Dichloroethylene	µg/L	17	17	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Methyl tert-butyl ether	µg/L	15	1400	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
1,1-Dichloroethane	µg/L	5	3100	0.30	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]
Methyl Ethyl Ketone	µg/L	1800	150000	1.0	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]
cis- 1,2-Dichloroethylene	µg/L	17	17	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Chloroform	µg/L	22	22	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
1,2-Dichloroethane	µg/L	5.0	12	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
1,1,1-Trichloroethane	µg/L	200	6700	0.30	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]
Carbon Tetrachloride	µg/L	5.0	8.4	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Benzene	µg/L	5.0	430	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
1,2-Dichloropropane	µg/L	5	140	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Trichloroethylene	µg/L	5	17	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Bromodichloromethane	µg/L	16	85000	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Methyl Isobutyl Ketone	µg/L	640	580000	1.0	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]	<1.0[<A]
1,1,1-Trichloroethane	µg/L	5	30	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Toluene	µg/L	24	18000	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Dibromochloromethane	µg/L	25	82000	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
Ethylene Dibromide	µg/L	0.2	0.83	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
Tetrachloroethylene	µg/L	17	17	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
1,1,1,2-Tetrachloroethane	µg/L	1.1	28	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
Chlorobenzene	µg/L	30	630	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
Ethylbenzene	µg/L	2.4	2300	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
m & p-Xylene	µg/L			0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

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CLIENT NAME: GOLDER ASSOCIATES LTD.

SAMPLING SITE:

ATTENTION TO: Daniel Stabile

SAMPLED BY:

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

DATE RECEIVED: 2020-03-27

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION:					MW20-1	MW20-2	MW20-3	MW20-4	MW20-5	MW20-6	DUP1
SAMPLE TYPE:					Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:					2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26	2020-03-26
Parameter	Unit	G / S: A	G / S: B	RDL	1053196	1053209	1053210	1053211	1053212	1053213	1053216
Bromoform	µg/L	25	770	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
Styrene	µg/L	5.4	9100	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
1,1,2,2-Tetrachloroethane	µg/L	1	15	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
o-Xylene	µg/L			0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	59	9600	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
1,4-Dichlorobenzene	µg/L	1	67	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
1,2-Dichlorobenzene	µg/L	3	9600	0.10	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]	<0.10[<A]
1,3-Dichloropropene	µg/L	0.5	45	0.30	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]	<0.30[<A]
Xylenes (Total)	µg/L	300	4200	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
n-Hexane	µg/L	520	520	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]	<0.20[<A]
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery		50-140		100	99	94	75	99	100	99
4-Bromofluorobenzene	% Recovery		50-140		91	93	92	93	92	86	85

Certified By:

N Popmukolof



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AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-27

DATE REPORTED: 2020-04-13

Parameter	Unit	SAMPLE DESCRIPTION:			Field Blank	Trip Blank
		SAMPLE TYPE:			Water	Water
		DATE SAMPLED:			2020-03-26	2020-03-26
		G / S: A	G / S: B	RDL	1053217	1053219
Dichlorodifluoromethane	µg/L	590	4400	0.20	<0.20[<A]	<0.20[<A]
Vinyl Chloride	µg/L	1.7	1.7	0.17	<0.17[<A]	<0.17[<A]
Bromomethane	µg/L	0.89	56	0.20	<0.20[<A]	<0.20[<A]
Trichlorofluoromethane	µg/L	150	2500	0.40	<0.40[<A]	<0.40[<A]
Acetone	µg/L	2700	130000	1.0	<1.0[<A]	<1.0[<A]
1,1-Dichloroethylene	µg/L	14	17	0.30	<0.30[<A]	<0.30[<A]
Methylene Chloride	µg/L	50	5500	0.30	<0.30[<A]	<0.30[<A]
trans- 1,2-Dichloroethylene	µg/L	17	17	0.20	<0.20[<A]	<0.20[<A]
Methyl tert-butyl ether	µg/L	15	1400	0.20	<0.20[<A]	<0.20[<A]
1,1-Dichloroethane	µg/L	5	3100	0.30	<0.30[<A]	<0.30[<A]
Methyl Ethyl Ketone	µg/L	1800	150000	1.0	<1.0[<A]	<1.0[<A]
cis- 1,2-Dichloroethylene	µg/L	17	17	0.20	<0.20[<A]	<0.20[<A]
Chloroform	µg/L	22	22	0.20	<0.20[<A]	<0.20[<A]
1,2-Dichloroethane	µg/L	5.0	12	0.20	<0.20[<A]	<0.20[<A]
1,1,1-Trichloroethane	µg/L	200	6700	0.30	<0.30[<A]	<0.30[<A]
Carbon Tetrachloride	µg/L	5.0	8.4	0.20	<0.20[<A]	<0.20[<A]
Benzene	µg/L	5.0	430	0.20	<0.20[<A]	<0.20[<A]
1,2-Dichloropropane	µg/L	5	140	0.20	<0.20[<A]	<0.20[<A]
Trichloroethylene	µg/L	5	17	0.20	<0.20[<A]	<0.20[<A]
Bromodichloromethane	µg/L	16	85000	0.20	<0.20[<A]	<0.20[<A]
Methyl Isobutyl Ketone	µg/L	640	580000	1.0	<1.0[<A]	<1.0[<A]
1,1,2-Trichloroethane	µg/L	5	30	0.20	<0.20[<A]	<0.20[<A]
Toluene	µg/L	24	18000	0.20	<0.20[<A]	<0.20[<A]
Dibromochloromethane	µg/L	25	82000	0.10	<0.10[<A]	<0.10[<A]
Ethylene Dibromide	µg/L	0.2	0.83	0.10	<0.10[<A]	<0.10[<A]
Tetrachloroethylene	µg/L	17	17	0.20	<0.20[<A]	<0.20[<A]
1,1,1,2-Tetrachloroethane	µg/L	1.1	28	0.10	<0.10[<A]	<0.10[<A]
Chlorobenzene	µg/L	30	630	0.10	<0.10[<A]	<0.10[<A]
Ethylbenzene	µg/L	2.4	2300	0.10	<0.10[<A]	<0.10[<A]
m & p-Xylene	µg/L			0.20	<0.20	<0.20

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Certificate of Analysis

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-27

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION:					Field Blank	Trip Blank
SAMPLE TYPE:					Water	Water
DATE SAMPLED:					2020-03-26	2020-03-26
Parameter	Unit	G / S: A	G / S: B	RDL	1053217	1053219
Bromoform	µg/L	25	770	0.10	<0.10[<A]	<0.10[<A]
Styrene	µg/L	5.4	9100	0.10	<0.10[<A]	<0.10[<A]
1,1,2,2-Tetrachloroethane	µg/L	1	15	0.10	<0.10[<A]	<0.10[<A]
o-Xylene	µg/L			0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	59	9600	0.10	<0.10[<A]	<0.10[<A]
1,4-Dichlorobenzene	µg/L	1	67	0.10	<0.10[<A]	<0.10[<A]
1,2-Dichlorobenzene	µg/L	3	9600	0.10	<0.10[<A]	<0.10[<A]
1,3-Dichloropropene	µg/L	0.5	45	0.30	<0.30[<A]	<0.30[<A]
Xylenes (Total)	µg/L	300	4200	0.20	<0.20[<A]	<0.20[<A]
n-Hexane	µg/L	520	520	0.20	<0.20[<A]	<0.20[<A]
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery		50-140		117	116
4-Bromofluorobenzene	% Recovery		50-140		86	83

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
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.

1053196-1053219 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.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

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

CLIENT NAME: GOLDER ASSOCIATES LTD.

SAMPLING SITE:

ATTENTION TO: Daniel Stabile

SAMPLED BY:

Total PCBs (water)

DATE RECEIVED: 2020-03-27

DATE REPORTED: 2020-04-13

		SAMPLE DESCRIPTION:			MW20-6	DUP1
		SAMPLE TYPE:			Water	Water
		DATE SAMPLED:			2020-03-26	2020-03-26
Parameter	Unit	G / S: A	G / S: B	RDL	1053213	1053216
PCBs	µg/L	3	15	0.1	<0.1[<A]	<0.1[<A]
Surrogate	Unit	Acceptable Limits				
Decachlorobiphenyl	%	60-130			74	79

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-27

DATE REPORTED: 2020-04-13

SAMPLE DESCRIPTION:					MW20-1		MW20-2	MW20-3		MW20-4
SAMPLE TYPE:					Water		Water	Water		Water
DATE SAMPLED:					2020-03-26		2020-03-26	2020-03-26		2020-03-26
Parameter	Unit	G / S: A	G / S: B	RDL	1053196	RDL	1053209	1053210	RDL	1053211
Dissolved Antimony	µg/L	6	20000	1.0	<1.0[<A]	1.0	<1.0[<A]	<1.0[<A]	1.0	<1.0[<A]
Dissolved Arsenic	µg/L	25	1900	1.0	1.0[<A]	1.0	<1.0[<A]	<1.0[<A]	1.0	4.6[<A]
Dissolved Barium	µg/L	1000	29000	2.0	277[<A]	2.0	81.8[<A]	95.4[<A]	2.0	144[<A]
Dissolved Beryllium	µg/L	4	67	0.50	<0.50[<A]	0.50	<0.50[<A]	<0.50[<A]	0.50	<0.50[<A]
Dissolved Boron	µg/L	5000	45000	10.0	30.9[<A]	10.0	59.6[<A]	18.5[<A]	10.0	36.5[<A]
Dissolved Cadmium	µg/L	2.7	2.7	0.20	<0.20[<A]	0.20	<0.20[<A]	<0.20[<A]	0.20	<0.20[<A]
Dissolved Chromium	µg/L	50	810	2.0	<2.0[<A]	2.0	<2.0[<A]	<2.0[<A]	2.0	<2.0[<A]
Dissolved Cobalt	µg/L	3.8	66	0.50	<0.50[<A]	0.50	0.98[<A]	1.28[<A]	0.50	<0.50[<A]
Dissolved Copper	µg/L	87	87	1.0	<1.0[<A]	1.0	2.3[<A]	<1.0[<A]	1.0	<1.0[<A]
Dissolved Lead	µg/L	10	25	0.50	<0.50[<A]	0.50	<0.50[<A]	<0.50[<A]	0.50	<0.50[<A]
Dissolved Molybdenum	µg/L	70	9200	0.50	13.7[<A]	0.50	1.72[<A]	1.81[<A]	0.50	17.4[<A]
Dissolved Nickel	µg/L	100	490	1.0	1.4[<A]	1.0	8.7[<A]	3.8[<A]	1.0	<1.0[<A]
Dissolved Selenium	µg/L	10	63	1.0	<1.0[<A]	1.0	<1.0[<A]	<1.0[<A]	1.0	<1.0[<A]
Dissolved Silver	µg/L	1.5	1.5	0.20	<0.20[<A]	0.20	<0.20[<A]	<0.20[<A]	0.20	<0.20[<A]
Dissolved Thallium	µg/L	2	510	0.30	<0.30[<A]	0.30	<0.30[<A]	<0.30[<A]	0.30	<0.30[<A]
Dissolved Uranium	µg/L	20	420	0.50	1.01[<A]	0.50	0.97[<A]	4.56[<A]	0.50	3.07[<A]
Dissolved Vanadium	µg/L	6.2	250	0.40	0.74[<A]	0.40	1.84[<A]	0.62[<A]	0.40	0.50[<A]
Dissolved Zinc	µg/L	1100	1100	5.0	<5.0[<A]	5.0	<5.0[<A]	<5.0[<A]	5.0	<5.0[<A]
Mercury	µg/L	1	2.8	0.02	<0.02[<A]	0.02	<0.02[<A]	<0.02[<A]	0.02	<0.02[<A]
Chromium VI	µg/L	25	140	5	<5[<A]	5	<5[<A]	<5[<A]	5	<5[<A]
Cyanide, Free	µg/L	66	66	2	<2[<A]	2	<2[<A]	<2[<A]	2	<2[<A]
Dissolved Sodium	µg/L	490000	2300000	50	47200[<A]	250	169000[<A]	26700[<A]	50	97600[<A]
Chloride	µg/L	790000	2300000	500	66300[<A]	1000	387000[<A]	378000[<A]	500	28200[<A]
Electrical Conductivity	uS/cm			2	984	2	2130	1990	2	940
pH	pH Units			NA	7.85	NA	7.91	7.72	NA	7.98

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-27

DATE REPORTED: 2020-04-13

		SAMPLE DESCRIPTION:			MW20-5	MW20-6	DUP1
		SAMPLE TYPE:			Water	Water	Water
		DATE SAMPLED:			2020-03-26	2020-03-26	2020-03-26
Parameter	Unit	G / S: A	G / S: B	RDL	1053212	1053213	1053216
Dissolved Antimony	µg/L	6	20000	1.0	<1.0[<A]	<1.0[<A]	<1.0[<A]
Dissolved Arsenic	µg/L	25	1900	1.0	1.8[<A]	<1.0[<A]	<1.0[<A]
Dissolved Barium	µg/L	1000	29000	2.0	263[<A]	64.1[<A]	65.6[<A]
Dissolved Beryllium	µg/L	4	67	0.50	<0.50[<A]	<0.50[<A]	<0.50[<A]
Dissolved Boron	µg/L	5000	45000	10.0	28.7[<A]	98.3[<A]	103[<A]
Dissolved Cadmium	µg/L	2.7	2.7	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]
Dissolved Chromium	µg/L	50	810	2.0	<2.0[<A]	<2.0[<A]	<2.0[<A]
Dissolved Cobalt	µg/L	3.8	66	0.50	<0.50[<A]	<0.50[<A]	<0.50[<A]
Dissolved Copper	µg/L	87	87	1.0	<1.0[<A]	1.1[<A]	<1.0[<A]
Dissolved Lead	µg/L	10	25	0.50	0.54[<A]	<0.50[<A]	<0.50[<A]
Dissolved Molybdenum	µg/L	70	9200	0.50	10.2[<A]	2.48[<A]	2.11[<A]
Dissolved Nickel	µg/L	100	490	1.0	<1.0[<A]	<1.0[<A]	<1.0[<A]
Dissolved Selenium	µg/L	10	63	1.0	<1.0[<A]	<1.0[<A]	<1.0[<A]
Dissolved Silver	µg/L	1.5	1.5	0.20	<0.20[<A]	<0.20[<A]	<0.20[<A]
Dissolved Thallium	µg/L	2	510	0.30	<0.30[<A]	<0.30[<A]	<0.30[<A]
Dissolved Uranium	µg/L	20	420	0.50	0.62[<A]	<0.50[<A]	<0.50[<A]
Dissolved Vanadium	µg/L	6.2	250	0.40	0.80[<A]	<0.40[<A]	<0.40[<A]
Dissolved Zinc	µg/L	1100	1100	5.0	<5.0[<A]	<5.0[<A]	<5.0[<A]
Mercury	µg/L	1	2.8	0.02	<0.02[<A]	<0.02[<A]	<0.02[<A]
Chromium VI	µg/L	25	140	5	<5[<A]	<5[<A]	<5[<A]
Cyanide, Free	µg/L	66	66	2	<2[<A]	<2[<A]	<2[<A]
Dissolved Sodium	µg/L	490000	2300000	50	39700[<A]	13800[<A]	14500[<A]
Chloride	µg/L	790000	2300000	200	51400[<A]	6640[<A]	6700[<A]
Electrical Conductivity	uS/cm			2	772	700	720
pH	pH Units			NA	8.04	7.94	7.96

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

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CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-03-27

DATE REPORTED: 2020-04-13

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils, B Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
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.
1053196-1053216 Elevated RDLs indicate the degree of sample dilutions prior to the analysis to keep analytes within the calibration range or reduce matrix interference.
Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Apr 13, 2020			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper

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

Dichlorodifluoromethane	1048741		< 0.20	< 0.20	NA	< 0.20	97%	50%	140%	97%	50%	140%	107%	50%	140%
Vinyl Chloride	1048741		< 0.17	< 0.17	NA	< 0.17	81%	50%	140%	115%	50%	140%	115%	50%	140%
Bromomethane	1048741		< 0.20	< 0.20	NA	< 0.20	90%	50%	140%	95%	50%	140%	107%	50%	140%
Trichlorofluoromethane	1048741		< 0.40	< 0.40	NA	< 0.40	90%	50%	140%	103%	50%	140%	112%	50%	140%
Acetone	1048741		< 1.0	< 1.0	NA	< 1.0	103%	50%	140%	99%	50%	140%	91%	50%	140%
1,1-Dichloroethylene	1048741		< 0.30	< 0.30	NA	< 0.30	91%	50%	140%	116%	60%	130%	93%	50%	140%
Methylene Chloride	1048741		< 0.30	< 0.30	NA	< 0.30	128%	50%	140%	91%	60%	130%	91%	50%	140%
trans- 1,2-Dichloroethylene	1048741		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	107%	60%	130%	109%	50%	140%
Methyl tert-butyl ether	1048741		< 0.20	< 0.20	NA	< 0.20	91%	50%	140%	111%	60%	130%	99%	50%	140%
1,1-Dichloroethane	1048741		< 0.30	< 0.30	NA	< 0.30	114%	50%	140%	104%	60%	130%	93%	50%	140%
Methyl Ethyl Ketone	1048741		< 1.0	< 1.0	NA	< 1.0	103%	50%	140%	91%	50%	140%	101%	50%	140%
cis- 1,2-Dichloroethylene	1048741		< 0.20	< 0.20	NA	< 0.20	122%	50%	140%	117%	60%	130%	89%	50%	140%
Chloroform	1048741		< 0.20	< 0.20	NA	< 0.20	93%	50%	140%	91%	60%	130%	111%	50%	140%
1,2-Dichloroethane	1048741		< 0.20	< 0.20	NA	< 0.20	111%	50%	140%	108%	60%	130%	91%	50%	140%
1,1,1-Trichloroethane	1048741		< 0.30	< 0.30	NA	< 0.30	91%	50%	140%	93%	60%	130%	108%	50%	140%
Carbon Tetrachloride	1048741		< 0.20	< 0.20	NA	< 0.20	104%	50%	140%	107%	60%	130%	89%	50%	140%
Benzene	1048741		< 0.20	< 0.20	NA	< 0.20	91%	50%	140%	80%	60%	130%	92%	50%	140%
1,2-Dichloropropane	1048741		< 0.20	< 0.20	NA	< 0.20	88%	50%	140%	71%	60%	130%	88%	50%	140%
Trichloroethylene	1048741		< 0.20	< 0.20	NA	< 0.20	94%	50%	140%	95%	60%	140%	113%	50%	140%
Bromodichloromethane	1048741		< 0.20	< 0.20	NA	< 0.20	100%	50%	140%	99%	60%	130%	111%	50%	140%
Methyl Isobutyl Ketone	1048741		< 1.0	< 1.0	NA	< 1.0	104%	50%	140%	93%	50%	140%	100%	50%	140%
1,1,2-Trichloroethane	1048741		< 0.20	< 0.20	NA	< 0.20	109%	50%	140%	84%	60%	130%	114%	50%	140%
Toluene	1048741		< 0.20	< 0.20	NA	< 0.20	93%	50%	140%	105%	60%	130%	107%	50%	140%
Dibromochloromethane	1048741		< 0.10	< 0.10	NA	< 0.10	85%	50%	140%	91%	60%	130%	106%	50%	140%
Ethylene Dibromide	1048741		< 0.10	< 0.10	NA	< 0.10	89%	50%	140%	94%	60%	130%	114%	50%	140%
Tetrachloroethylene	1048741		< 0.20	< 0.20	NA	< 0.20	111%	50%	140%	112%	60%	130%	108%	50%	140%
1,1,1,2-Tetrachloroethane	1048741		< 0.10	< 0.10	NA	< 0.10	90%	50%	140%	116%	60%	130%	93%	50%	140%
Chlorobenzene	1048741		< 0.10	< 0.10	NA	< 0.10	111%	50%	140%	109%	60%	130%	113%	50%	140%
Ethylbenzene	1048741		< 0.10	< 0.10	NA	< 0.10	105%	50%	140%	93%	60%	130%	114%	50%	140%
m & p-Xylene	1048741		< 0.20	< 0.20	NA	< 0.20	116%	50%	140%	101%	60%	130%	119%	50%	140%
Bromoform	1048741		< 0.10	< 0.10	NA	< 0.10	91%	50%	140%	91%	60%	130%	113%	50%	140%
Styrene	1048741		< 0.10	< 0.10	NA	< 0.10	108%	50%	140%	91%	60%	130%	109%	50%	140%
1,1,2,2-Tetrachloroethane	1048741		< 0.10	< 0.10	NA	< 0.10	109%	50%	140%	92%	60%	130%	112%	50%	140%
o-Xylene	1048741		< 0.10	< 0.10	NA	< 0.10	113%	50%	140%	109%	60%	130%	93%	50%	140%
1,3-Dichlorobenzene	1048741		< 0.10	< 0.10	NA	< 0.10	91%	50%	140%	120%	60%	130%	109%	50%	140%
1,4-Dichlorobenzene	1048741		< 0.10	< 0.10	NA	< 0.10	111%	50%	140%	118%	60%	130%	89%	50%	140%
1,2-Dichlorobenzene	1048741		< 0.10	< 0.10	NA	< 0.10	88%	50%	140%	106%	60%	130%	113%	50%	140%
1,3-Dichloropropene	1048741		< 0.30	< 0.30	NA	< 0.30	98%	50%	140%	90%	60%	130%	88%	50%	140%
n-Hexane	1048741		< 0.20	< 0.20	NA	< 0.20	107%	50%	140%	97%	60%	130%	103%	50%	140%

Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Apr 13, 2020			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

F1 (C6-C10)	1041074		< 25	< 25	NA	< 25	96%	60%	140%	101%	60%	140%	104%	60%	140%
F2 (C10 to C16)		TW	< 100	< 100	NA	< 100	100%	60%	140%	110%	60%	140%	84%	60%	140%
F3 (C16 to C34)		TW	< 100	< 100	NA	< 100	94%	60%	140%	99%	60%	140%	102%	60%	140%
F4 (C34 to C50)		TW	< 100	< 100	NA	< 100	89%	60%	140%	95%	60%	140%	106%	60%	140%

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

Naphthalene		TW	< 0.20	< 0.20	NA	< 0.20	85%	50%	140%	86%	50%	140%	90%	50%	140%
Acenaphthylene		TW	< 0.20	< 0.20	NA	< 0.20	97%	50%	140%	106%	50%	140%	111%	50%	140%
Acenaphthene		TW	< 0.20	< 0.20	NA	< 0.20	111%	50%	140%	102%	50%	140%	106%	50%	140%
Fluorene		TW	< 0.20	< 0.20	NA	< 0.20	85%	50%	140%	91%	50%	140%	87%	50%	140%
Phenanthrene		TW	< 0.10	< 0.10	NA	< 0.10	73%	50%	140%	86%	50%	140%	82%	50%	140%
Anthracene		TW	< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	109%	50%	140%	110%	50%	140%
Fluoranthene		TW	< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	106%	50%	140%	103%	50%	140%
Pyrene		TW	< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	102%	50%	140%	98%	50%	140%
Benz(a)anthracene		TW	< 0.20	< 0.20	NA	< 0.20	75%	50%	140%	105%	50%	140%	88%	50%	140%
Chrysene		TW	< 0.10	< 0.10	NA	< 0.10	90%	50%	140%	96%	50%	140%	86%	50%	140%
Benzo(b)fluoranthene		TW	< 0.10	< 0.10	NA	< 0.10	110%	50%	140%	94%	50%	140%	92%	50%	140%
Benzo(k)fluoranthene		TW	< 0.10	< 0.10	NA	< 0.10	91%	50%	140%	82%	50%	140%	81%	50%	140%
Benzo(a)pyrene		TW	< 0.01	< 0.01	NA	< 0.01	118%	50%	140%	81%	50%	140%	80%	50%	140%
Indeno(1,2,3-cd)pyrene		TW	< 0.20	< 0.20	NA	< 0.20	115%	50%	140%	78%	50%	140%	77%	50%	140%
Dibenz(a,h)anthracene		TW	< 0.20	< 0.20	NA	< 0.20	115%	50%	140%	91%	50%	140%	80%	50%	140%
Benzo(g,h,i)perylene		TW	< 0.20	< 0.20	NA	< 0.20	115%	50%	140%	77%	50%	140%	84%	50%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.

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).

Total PCBs (water)

PCBs	106099		< 0.1	< 0.1	NA	< 0.1	103%	60%	140%	104%	60%	140%	106%	60%	140%
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Certified By:



Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

PROJECT: 20139596(3000)

SAMPLING SITE:

AGAT WORK ORDER: 20T588625

ATTENTION TO: Daniel Stabile

SAMPLED BY:

Water Analysis															
RPT Date: Apr 13, 2020			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Dissolved Antimony	1048258		< 1.0	< 1.0	NA	< 1.0	106%	70%	130%	103%	80%	120%	101%	70%	130%
Dissolved Arsenic	1048258		< 1.0	< 1.0	NA	< 1.0	104%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Barium	1048258		189	192	1.6%	< 2.0	101%	70%	130%	99%	80%	120%	97%	70%	130%
Dissolved Beryllium	1048258		< 0.50	< 0.50	NA	< 0.50	100%	70%	130%	97%	80%	120%	106%	70%	130%
Dissolved Boron	1048258		43.8	47.2	NA	< 10.0	101%	70%	130%	102%	80%	120%	107%	70%	130%
Dissolved Cadmium	1048258		< 0.20	< 0.20	NA	< 0.20	99%	70%	130%	99%	80%	120%	97%	70%	130%
Dissolved Chromium	1048258		< 2.0	< 2.0	NA	< 2.0	100%	70%	130%	102%	80%	120%	98%	70%	130%
Dissolved Cobalt	1048258		< 0.50	< 0.50	NA	< 0.50	101%	70%	130%	102%	80%	120%	96%	70%	130%
Dissolved Copper	1048258		3.9	4.3	NA	< 1.0	100%	70%	130%	102%	80%	120%	92%	70%	130%
Dissolved Lead	1048258		7.52	7.24	3.8%	< 0.50	97%	70%	130%	93%	80%	120%	82%	70%	130%
Dissolved Molybdenum	1048258		0.75	0.86	NA	< 0.50	102%	70%	130%	104%	80%	120%	102%	70%	130%
Dissolved Nickel	1048258		1.4	1.6	NA	< 1.0	103%	70%	130%	102%	80%	120%	93%	70%	130%
Dissolved Selenium	1048258		1.6	1.8	NA	< 1.0	93%	70%	130%	92%	80%	120%	98%	70%	130%
Dissolved Silver	1048258		< 0.20	< 0.20	NA	< 0.20	100%	70%	130%	102%	80%	120%	91%	70%	130%
Dissolved Thallium	1048258		0.78	0.64	NA	< 0.30	93%	70%	130%	98%	80%	120%	93%	70%	130%
Dissolved Uranium	1048258		0.67	0.66	NA	< 0.50	105%	70%	130%	99%	80%	120%	98%	70%	130%
Dissolved Vanadium	1048258		< 0.40	< 0.40	NA	< 0.40	101%	70%	130%	101%	80%	120%	102%	70%	130%
Dissolved Zinc	1048258		< 5.0	< 5.0	NA	< 5.0	101%	70%	130%	100%	80%	120%	95%	70%	130%
Mercury	1053196	1053196	<0.02	<0.02	NA	< 0.02	103%	70%	130%	101%	80%	120%	99%	70%	130%
Chromium VI	1053186		<5	<5	NA	< 5	100%	70%	130%	101%	80%	120%	97%	70%	130%
Cyanide, Free	1051294		<2	<2	NA	< 2	86%	70%	130%	92%	80%	120%	94%	70%	130%
Dissolved Sodium	1053196	1053196	47200	47400	0.4%	< 50	97%	70%	130%	96%	80%	120%	98%	70%	130%
Chloride	1053138		69400	69200	0.3%	< 100	96%	70%	130%	108%	80%	120%	105%	70%	130%
Electrical Conductivity	1051636		1920	1930	0.5%	< 2	104%	90%	110%	NA			NA		
pH	1051636		7.53	7.47	0.8%	NA	101%	90%	110%	NA			NA		

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

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

Electrical Conductivity	1053210	1053210	1990	2000	0.5%	< 2	105%	90%	110%	NA			NA		
pH	1053210	1053210	7.72	7.76	0.5%	NA	102%	90%	110%	NA			NA		

Comments: NA signifies Not Applicable.

If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By:




Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Benz(a)anthracene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Acenaphthene-d10	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Chrysene-d12	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
F1 (C6-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
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F1 (C6-C10)	VOL-91- 5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	P&T GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
PCBs	ORG-91-5112	EPA SW-846 3510 & 8082	GC/ECD
Decachlorobiphenyl	ORG-91-5112	EPA SW-846 3510 & 8082	GC/ECD

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 20T588625

PROJECT: 20139596(3000)

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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-93-6034	modified from SM 3500-CR B	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015 and SM 4500-CN- I	TECHNICON AUTO ANALYZER
Dissolved Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
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

5836 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web: earth@agatlabs.com

Chain of Custody Record

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

Report Information:

Company: Golder Associates
Contact: Daniel Stabile
Address: 100 Scotia Crt
Whitby ON
Phone: _____ Fax: _____
Reports to be sent to: dstabile@golder.com
1. Email: _____
2. Email: _____

Project Information:

Project: 20139596(3000)
Site Location: 683 Warden Ave
Sampled By: AVANROON
AGAT Quote #: _____ PO: _____

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

Invoice Information:

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

Regulatory Requirements:

☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04

Table 192

☐ Indicate One

☐ Ind/Com

☒ Res/Park

☐ Agriculture

Soil Texture (Check One)

☐ Coarse

☒ Fine

☐ Sewer Use

☐ Sanitary

☐ Storm

Region _____

Indicate One

☐ MISA

☐ Regulation 558

☐ CCME

☐ 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

Sample Matrix Legend

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

Field Filtered - Metals, Hg, Cu, Pb

O. Reg 153

Metals and Inorganics
☐ All Metals ☐ 153 Metals (excl. Hydrides)
☐ Hydride Metals ☐ 153 Metals (incl. Hydrides)

ORPs: ☐ B-HWS ☐ Cl ☐ CN
☐ Cr ☐ EC ☐ FOC ☐ Hg
☐ pH ☐ SAR

Full Metals Scan

Regulation/Custom Metals

Nutrients: ☐ TP ☐ NH₃ ☐ TKN
☐ NO₃ ☐ NO₂ ☐ NO₃+NO₂

Volatiles: ☒ VOC ☒ BTEX ☐ THM

PHCs F1 - F4

ABNs

PAHs

PCBs ☒ Total ☐ Aroclors

Organochlorine Pesticides

TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs

Sewer Use

VOC/FI

Potentially Hazardous or High Concentration (Y/N)

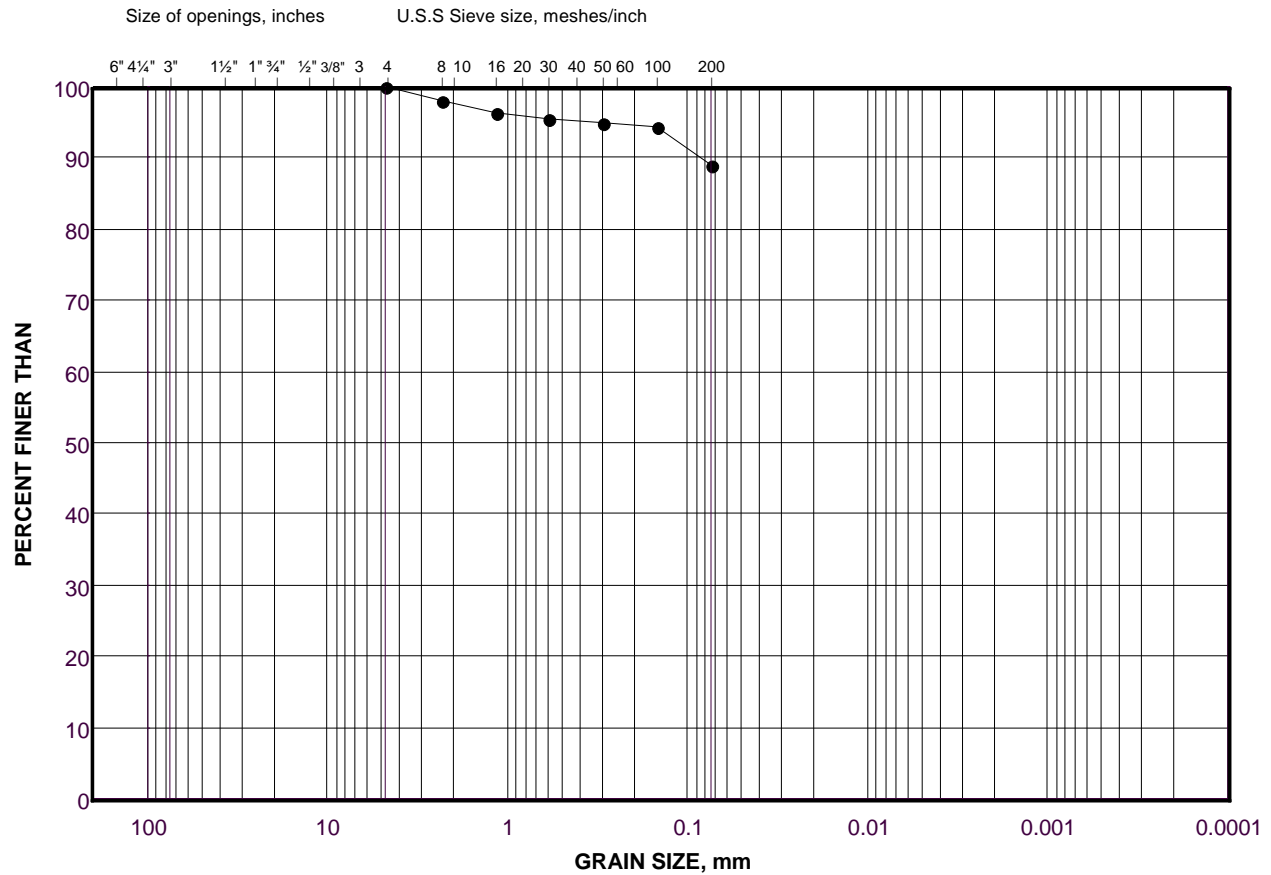
Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y	N	Metals and Inorganics	ORPs	Full Metals Scan	Regulation/Custom Metals	Nutrients	Volatiles	PHCs F1 - F4	ABNs	PAHs	PCBs	Organochlorine Pesticides	TCLP	Sewer Use	Potentially Hazardous or High Concentration (Y/N)
MW20-1	March 24/20	10:45am	13	GW		Y		X					X	X		X					
MW20-2		1:15pm	13			Y		X					X	X		X					
MW20-3		12:30pm	13			Y		X					X	X		X					
MW20-4		11:30am	13			Y		X					X	X		X					
MW20-5		12:15pm	13			Y		X					X	X		X					
MW20-6		10:30am	14			Y		X					X	X		X	X				
DUP		10:30am	14			Y		X					X	X		X	X				
Field Blank	"	-	3	W		NA														X	
Trip Blank	-	-	3	W		NA														X	

Samples Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: <u>March 24/20</u> Time: <u>5pm</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date: <u>3/27/20</u> Time: <u>10:42</u>	Page <u>1</u> of <u>1</u>
Samples Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: <u>3/27/20</u> Time: <u>1:12</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date: <u>3/27/20</u> Time: <u>10:42</u>	Nº: T100942

GRAIN SIZE DISTRIBUTION

MT0 LS-602

FIGURE



COBBLE SIZE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	GRAVEL SIZE		SAND SIZE			FINE GRAINED

LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
•	20-01	13	

Project Number: 20139596

Checked By: _____

Golder Associates

Date: 25-Mar-20

SOIL SIEVE ANALYSIS

Initial weight of dry sample = 140.8(g)

COARSE SIEVING

SIEVE	CUM. MASS RETAINED (g)	% RETAINED	PARTICLE SIZE(mm)	% PASSING
26.5mm	0.00	0.00	26.50	100.0
19.0mm	0.00	0.00	19.00	100.0
16mm	0.00	0.00	16.00	100.0
13.2mm	0.00	0.00	13.20	100.0
9.5mm	0.00	0.00	9.50	100.0
4.75mm	0.00	0.00	4.75	100.0
PAN	140.80	100.00	0.00	0.0

HYDROMETER BACK SIEVING

SIEVE	CUM. MASS RETAINED (g)	% RETAINED	PARTICLE SIZE(mm)	% PASSING
2.36mm	2.90	2.06	2.36	97.9
1.18mm	5.40	1.78	1.18	96.2
600µm	6.50	0.78	0.60	95.4
300µm	7.10	0.43	0.30	95.0
150µm	7.90	0.57	0.15	94.4
75µm	15.60	5.47	0.08	88.9

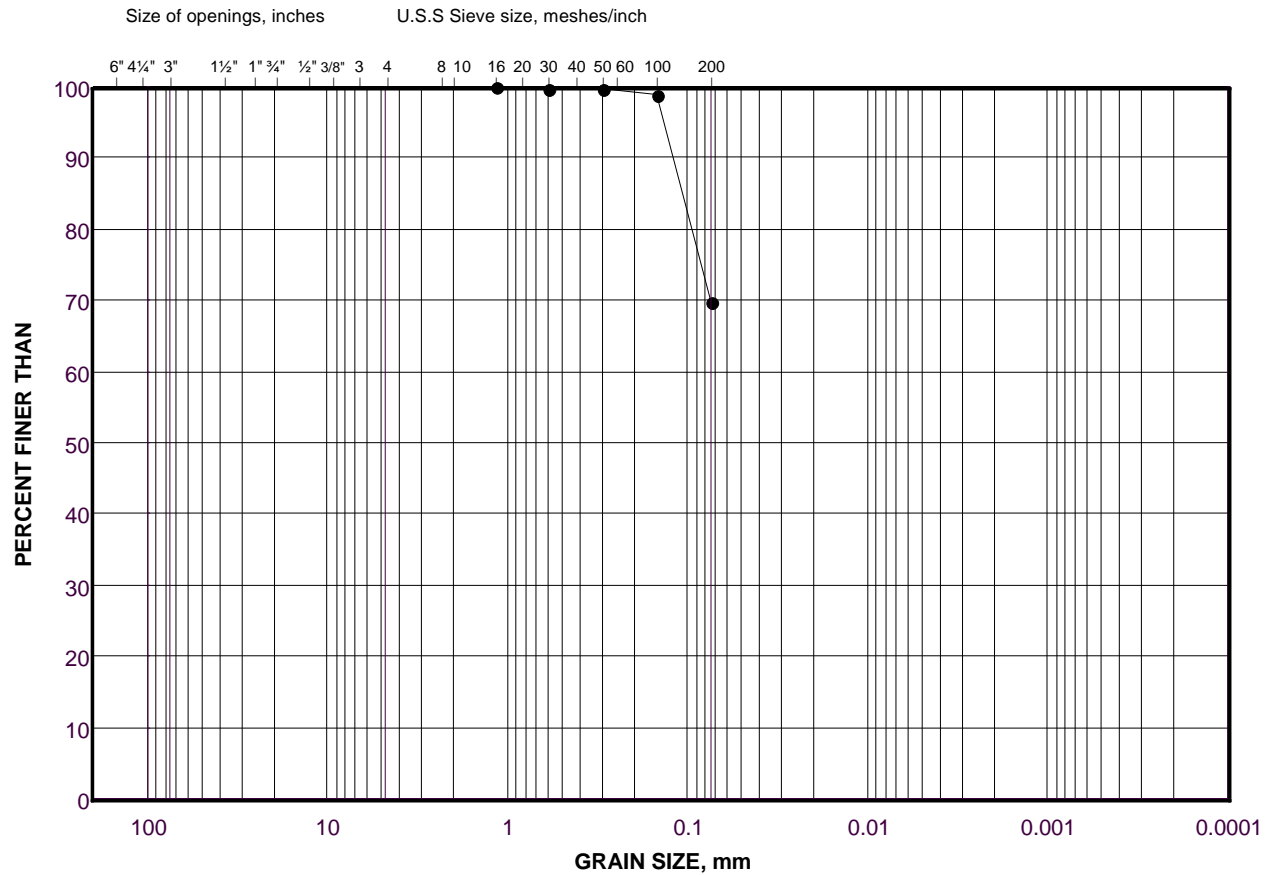
Project Number	20139596	Depth	
Project Task	1000	Units	Metric
Borehole Number	20-01	Testing Date	2020-03-25 5:29:20 PM
Sample Number	13	Tested By	Sieve - LB
Checked By	_____	LabID	20-286

Golder Associates

GRAIN SIZE DISTRIBUTION

MTO LS-602

FIGURE



COBBLE SIZE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	GRAVEL SIZE		SAND SIZE			FINE GRAINED

LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
•	20-02	10	

Project Number: 20139596

Checked By: _____

Golder Associates

Date: 25-Mar-20

SOIL SIEVE ANALYSIS

Initial weight of dry sample = 242.9(g)

COARSE SIEVING

SIEVE	CUM. MASS RETAINED (g)	% RETAINED	PARTICLE SIZE(mm)	% PASSING
26.5mm	0.00	0.00	26.50	100.0
19.0mm	0.00	0.00	19.00	100.0
16mm	0.00	0.00	16.00	100.0
13.2mm	0.00	0.00	13.20	100.0
9.5mm	0.00	0.00	9.50	100.0
4.75mm	0.00	0.00	4.75	100.0
PAN	242.70	100.00	0.00	0.0

HYDROMETER BACK SIEVING

SIEVE	CUM. MASS RETAINED (g)	% RETAINED	PARTICLE SIZE(mm)	% PASSING
2.36mm	0.00	0.00	2.36	100.0
1.18mm	0.00	0.00	1.18	100.0
600µm	0.50	0.21	0.60	99.8
300µm	1.00	0.21	0.30	99.6
150µm	2.30	0.54	0.15	99.0
75µm	73.30	29.25	0.08	69.8

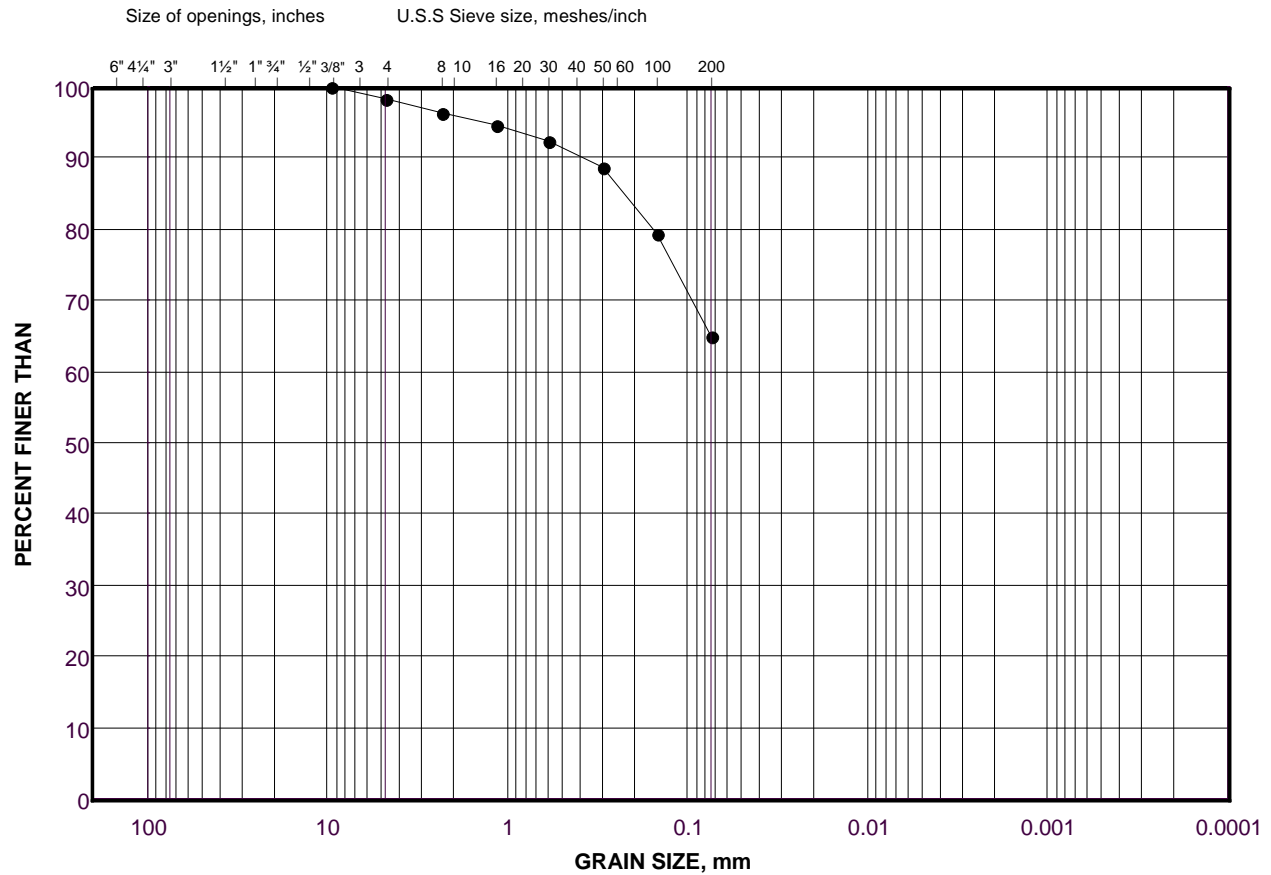
Project Number	20139596	Depth	
Project Task	1000	Units	Metric
Borehole Number	20-02	Testing Date	2020-03-25 5:32:07 PM
Sample Number	10	Tested By	Sieve - LB
Checked By	_____	LabID	20-287

Golder Associates

GRAIN SIZE DISTRIBUTION

MTO LS-602

FIGURE



COBBLE SIZE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	GRAVEL SIZE		SAND SIZE			FINE GRAINED

LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
•	20-3	4	

Project Number: 20139596

Checked By: _____

Golder Associates

Date: 25-Mar-20

SOIL SIEVE ANALYSIS

Initial weight of dry sample = 277.7(g)

COARSE SIEVING

SIEVE	CUM. MASS RETAINED (g)	% RETAINED	PARTICLE SIZE(mm)	% PASSING
26.5mm	0.00	0.00	26.50	100.0
19.0mm	0.00	0.00	19.00	100.0
16mm	0.00	0.00	16.00	100.0
13.2mm	0.00	0.00	13.20	100.0
9.5mm	0.00	0.00	9.50	100.0
4.75mm	5.00	1.80	4.75	98.2
PAN	272.50	98.20	0.00	0.0

HYDROMETER BACK SIEVING

SIEVE	CUM. MASS RETAINED (g)	% RETAINED	PARTICLE SIZE(mm)	% PASSING
2.36mm	5.10	1.84	2.36	96.4
1.18mm	10.30	1.87	1.18	94.5
600µm	15.80	1.98	0.60	92.5
300µm	26.20	3.75	0.30	88.8
150µm	52.40	9.44	0.15	79.3
75µm	92.30	14.38	0.08	64.9

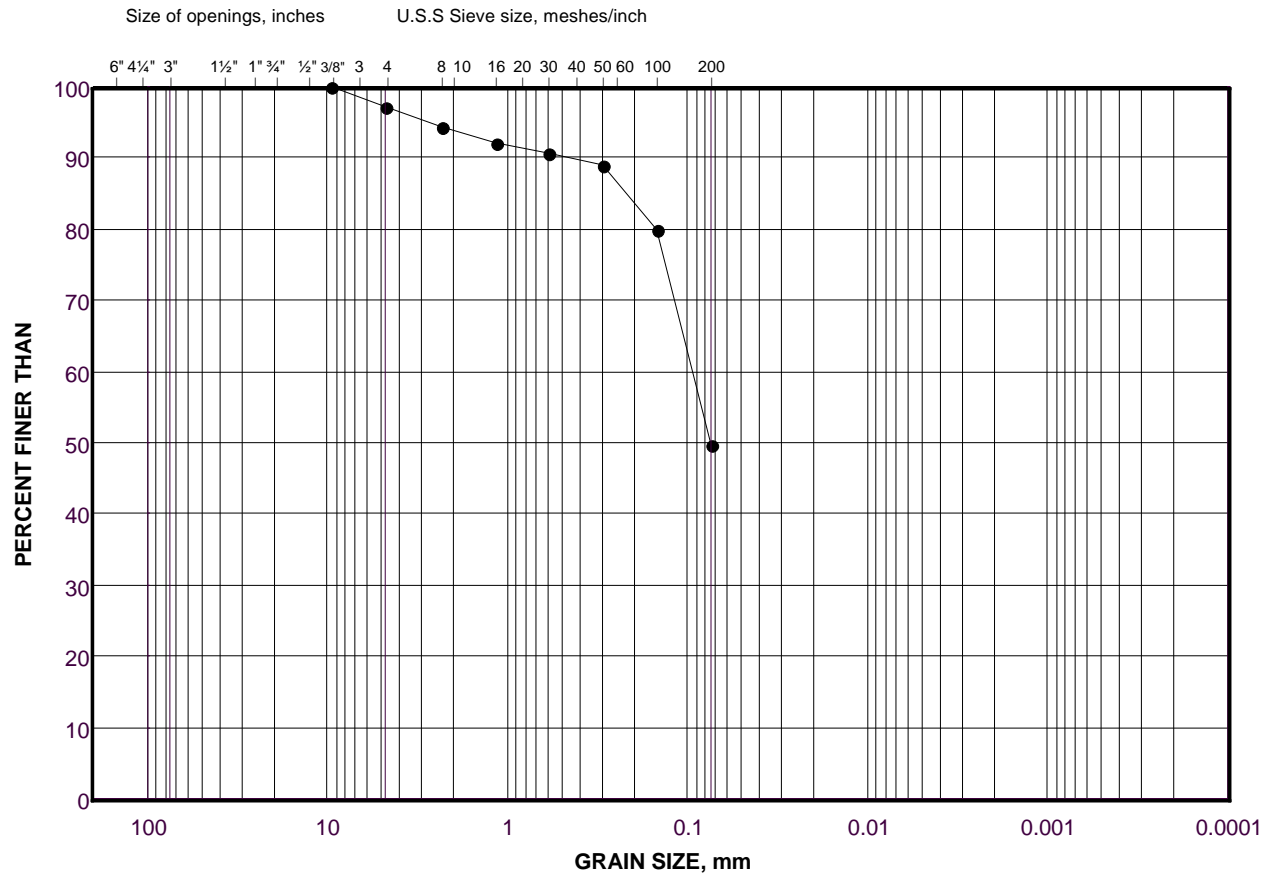
Project Number	20139596	Depth	
Project Task	1000	Units	Metric
Borehole Number	20-3	Testing Date	2020-03-25 5:59:39 PM
Sample Number	4	Tested By	Sieve - LB
Checked By	_____	LabID	20-290

Golder Associates

GRAIN SIZE DISTRIBUTION

MTO LS-602

FIGURE



COBBLE SIZE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	GRAVEL SIZE		SAND SIZE			FINE GRAINED

LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
•	20-05	9	

Project Number: 20139596

Checked By: _____

Golder Associates

Date: 25-Mar-20

SOIL SIEVE ANALYSIS

Initial weight of dry sample = 212.6(g)

COARSE SIEVING

SIEVE	CUM. MASS RETAINED (g)	% RETAINED	PARTICLE SIZE(mm)	% PASSING
26.5mm	0.00	0.00	26.50	100.0
19.0mm	0.00	0.00	19.00	100.0
16mm	0.00	0.00	16.00	100.0
13.2mm	0.00	0.00	13.20	100.0
9.5mm	0.00	0.00	9.50	100.0
4.75mm	5.70	2.68	4.75	97.3
PAN	206.90	97.32	0.00	0.0

HYDROMETER BACK SIEVING

SIEVE	CUM. MASS RETAINED (g)	% RETAINED	PARTICLE SIZE(mm)	% PASSING
2.36mm	6.50	3.06	2.36	94.3
1.18mm	11.10	2.16	1.18	92.1
600µm	14.10	1.41	0.60	90.7
300µm	17.90	1.79	0.30	88.9
150µm	37.00	8.98	0.15	79.9
75µm	101.20	30.20	0.08	49.7

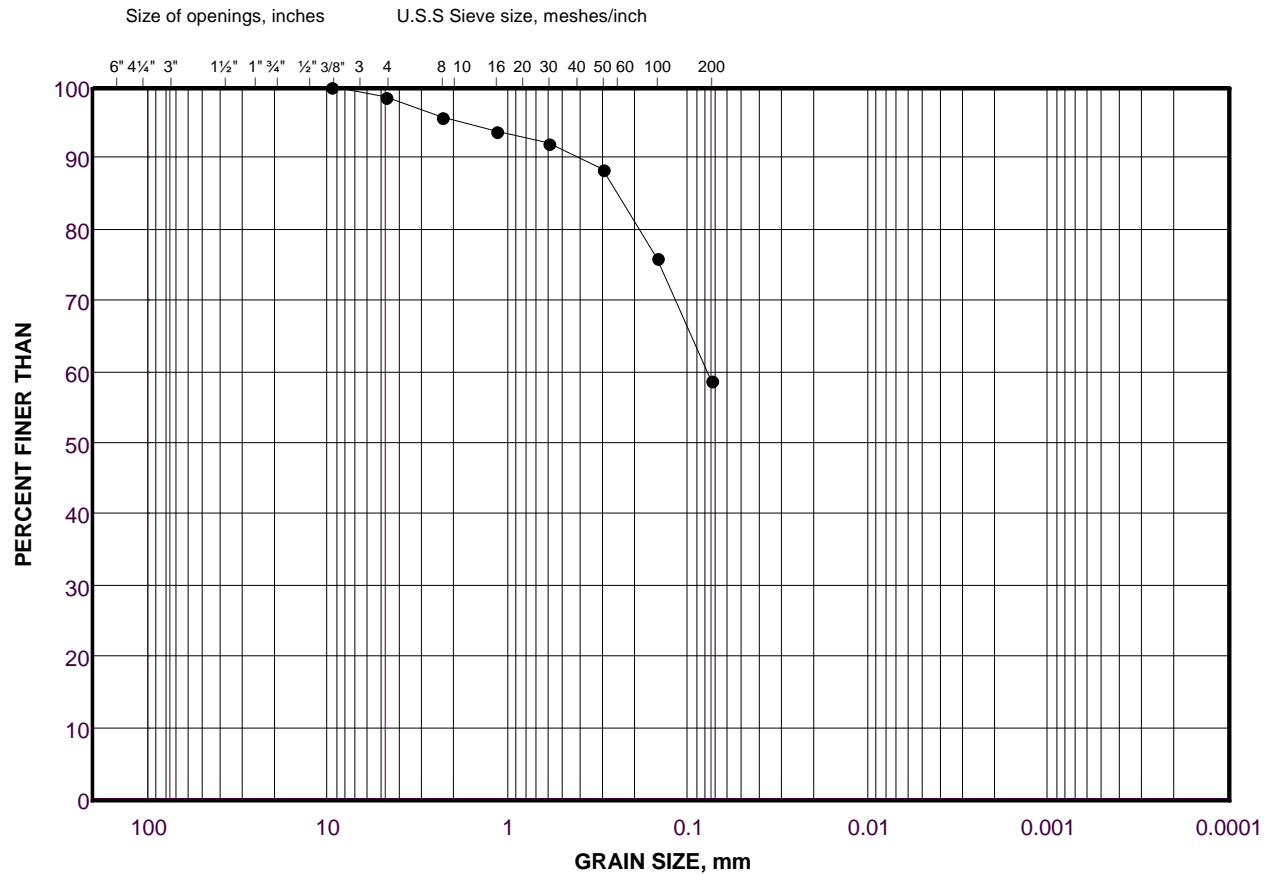
Project Number	20139596	Depth	
Project Task	1000	Units	Metric
Borehole Number	20-05	Testing Date	2020-03-25 5:34:15 PM
Sample Number	9	Tested By	Sieve - LB
Checked By	_____	LabID	20-288

Golder Associates

GRAIN SIZE DISTRIBUTION

MTO LS-602

FIGURE



COBBLE SIZE	COARSE	FINE	COARSE	MEDIUM	FINE	SILT AND CLAY SIZES
	GRAVEL SIZE		SAND SIZE			FINE GRAINED

LEGEND

SYMBOL	BOREHOLE	SAMPLE	DEPTH(m)
•	20-07	7	

Project Number: 20139596

Checked By: _____

Golder Associates

Date: 25-Mar-20

SOIL SIEVE ANALYSIS

Initial weight of dry sample = 96(g)

COARSE SIEVING

SIEVE	CUM. MASS RETAINED (g)	% RETAINED	PARTICLE SIZE(mm)	% PASSING
26.5mm	0.00	0.00	26.50	100.0
19.0mm	0.00	0.00	19.00	100.0
16mm	0.00	0.00	16.00	100.0
13.2mm	0.00	0.00	13.20	100.0
9.5mm	0.00	0.00	9.50	100.0
4.75mm	1.40	1.46	4.75	98.5
PAN	94.60	98.54	0.00	0.0

HYDROMETER BACK SIEVING

SIEVE	CUM. MASS RETAINED (g)	% RETAINED	PARTICLE SIZE(mm)	% PASSING
2.36mm	2.50	2.60	2.36	95.9
1.18mm	4.50	2.08	1.18	93.9
600µm	6.30	1.87	0.60	92.0
300µm	9.80	3.65	0.30	88.3
150µm	21.60	12.29	0.15	76.1
75µm	38.30	17.40	0.08	58.7

Project Number	20139596	Depth	
Project Task	1000	Units	Metric
Borehole Number	20-07	Testing Date	2020-03-25 5:36:17 PM
Sample Number	7	Tested By	Sieve - LB
Checked By	_____	LabID	20-289

Golder Associates

APPENDIX C

Correspondence with the
Municipality Regarding Use of Non-
Potable Standards

APPENDIX D

Sampling and Analysis Plan

SAMPLING AND ANALYSIS PLAN

REVIEWED BY Tom Mclellwain

DATE March 05, 2020

CC Ravi Patel, Amreen Murji

PREPARED BY Daniel Stabile

Project No. 20139596 (3000)

SAMPLING AND ANALYSIS PLAN, 683-685 WARDEN AVENUE, TORONTO, ONTARIO

This sampling and analysis plan has been prepared to document the details of Phase Two Environmental Site Assessment (ESA) planned investigation activities for the site located at 683-685 Warden Avenue, Toronto, Ontario (the Site or Property).

OBJECTIVE

The intent of Phase Two environmental site assessment ("ESA") is to investigate soil and groundwater quality associated with issues of potential environmental concern identified by the Phase One ESA prepared by Golder entitled "*Phase One Environmental Assessment, 683-685 Warden Avenue, Toronto, Ontario*" dated March 26, 2019.

SITE BACKGROUND

The site consists of rectangular 2.63 hectares (6.52 acres) of land. It is currently undeveloped, with soil and vegetated areas on the northern and central portion of the Site, and gravel areas on the southern area of the Site. The proposed future use of the Phase Two Property is a low to medium-rise residential development. The Site was historically used for commercial/industrial purposes. Given the former use of the Site and the proposed land-use change, it is understood that a Record of Site Condition is required for the Site, as per O. Reg. 153/04. The future land use is considered residential under O.Reg. 153/04.

Overburden geology is anticipated to consist of fine-textured material, composed by sandy silts, silts and clayey silts to silty clays. The nearest waterbody to the Site is Massey Creek, located approximately 180 m to the west.

SITE ACCESS REQUIREMENTS

Access Concern	Information
Site Contact	Mr. Farid Malek - Email: farid.malek@choicereit.ca
Access	Driveway off Warden Avenue. Call Site contact for access into inside areas.
Hours of Work	8:00am – 4:00pm
Site Check-in Procedure	Check in with PM upon arrival.

Access Concern	Information
Photography	No restrictions outside.
On-Site Orientation or Training	Standard daily tailgate meeting

GENERAL REQUIREMENTS

- Follow standard operating procedures.
- Complete JSA before commencing any fieldwork.
- Complete a Daily Log for every day of fieldwork. Use standard field forms.
- Initial calibration of field equipment should be performed at the start of each field day, with a daily check of calibration using a standard of known concentration.
- Clean disposable latex or Nitrile™ gloves will be used at each sampling location to prevent cross-contamination.
- All non-dedicated sampling equipment (e.g., water level meters, split spoons) will be decontaminated between sampling locations. Sampling equipment in contact with soil will be: cleaned with a brush, washed with a laboratory-grade detergent solution (e.g., phosphate-free LiquiNox or AlcoNox) and thoroughly rinsed with analyte-free water.
- All sample containers will be shipped to AGAT Labs

BOREHOLE DRILLING, MONITORING WELL INSTALLATION AND DEVELOPMENT

- **** Confirm that every drilling location has been cleared by the private locator ****
- A detailed description of the drilling scope and well construction details is provided in the driller work order
- Seven (7) boreholes should be drilled to a maximum depth of 15.85 m bgs
- Screen soil samples at 2.5 foot intervals using a photoionization detector ("PID") and combustible gas detector
- At each borehole location minimum, two soil (surface and subsurface) samples shall be submitted for analysis of the parameters list on the table below
- Observe any evidence of contamination (visual/olfactory)
- Drilling to be completed using a track-mounted drill rig (Landshark)
- Private locates to be completed by All Clear Locates

Collect additional soil samples from locations along the borehole that exhibit any evidence of contamination. Additional samples and/or other parameters for analysis should be added if warranted based on field observations. Contact the project manager if visible impacts are encountered.

Table 1 Borehole and soil sampling plan

Location	BH ID	Well Installed (Y/N)	Depth (m bgs)	Minimum Soil Samples*	Duplicate Samples
Located in the northwest corner of the Site	BH20-1	Y	15.0	1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH	None
Located in the southwest corner of the Site	BH20-2	Y	15.0	1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH	None
Located in the centre of the Site	BH20-3	Y	15.0	1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH	None
Located in the northeast corner of the Site	BH20-4	Y	15.0	1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH	None
Located in the southeast corner of the Site	BH20-5	Y	15.0	1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH	None
Located within the northern portion of the property	BH20- 6	Y	8.0	1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH 1 x PCB	1 x PHC F1-F4 + BTEX 1 x VOC
Located within the northern portion of the property	BH20-7	N	8.0	1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH	None

Notes:

Metals – Antimony (As), Arsenic (As), Ba (Barium), Beryllium (Be), Boron (B), Cadmium (Cd), Chromium (Cr), Cobalt (Co), Copper (Cu), Lead (Pb), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Silver (Ag), Thallium (Th), Uranium (U), Vanadium (V), Zinc (Zn);

ORP – Hexavalent Chromium (Cr-VI), Sodium (Na), Mercury (Hg), Hot Water Soluble Boron (B-HWS), Chloride (Cl-), Cyanide (CN-), Sodium Adsorption Ratio (SAR), Electrical Conductivity (EC);

PHC – Petroleum Hydrocarbons;

BTEX – Benzene, Toluene, Ethylbenzene and Xylenes;

VOC – Volatile Organic Compounds;

PAH – Polycyclic Aromatic Hydrocarbons.

- For well installation: 2 inches inside diameter (ID) Schedule 40 polyvinyl chloride (PVC) casing and 2 inch ID Schedule 40 PVC well screens (3 metres in length, #10 slot size); sand pack surrounding each screen will be #0N; each monitoring well will be completed at ground surface with a stick up protective casing set in concrete and sealed with a PVC j-plug.
- Upon completion, the monitoring wells will be locked with a Golder lock.
- Mark the reference point at the top of the well pipe with a small notch. Install Waterra tubing and foot valve in each new monitoring well.
- Develop monitoring wells in accordance with Golder's standard operating procedure (SOP5). Use Waterra for well development. Record development information on standard field form.

Table 2: Monitoring Well Construction Design

Borehole ID	Depth of Screen Base (m bgs)	Screen Length (m)	Well Diameter (inches)	Protective casing Type
BH20-1	15.0	3.0	2	Monument Casing
BH20-2	8.0	3.0	2	Monument Casing
BH20-3	8.0	3.0	2	Monument Casing
BH20-4	15.0	3.0	2	Monument Casing
BH20-5	15.0	3.0	2	Monument Casing
BH20-6	8.0	3.0	2	Monument Casing

GROUNDWATER MONITORING AND SAMPLING

- Before measuring the water levels, open the J-plugs to allow air in the casing to vent and the water level to stabilize (make note on daily log if venting occurs).
- Collect a round of water level measurements using the water level meter following the standard operating procedures (SOP2). Use the "Static Water Level Field Form".
- The multi-parameter meter should be initially calibrated the equipment supplier and thereafter at the start of each day. Check calibration to known pH and conductivity concentration at mid-day. If equipment is out of calibration (i.e., reading is off by more than 10%), call Daniel.
- Purge and sample using conventional techniques, as per standard operating procedures (SOP9). Consider wells to be low yield. Proceed with the purging and sampling accordingly.
- Collect quality assurance samples as indicated in Table 3. The duplicate groundwater sample should be labelled in a manner in which the laboratory cannot readily identify the sample as a duplicate.
- Please call Daniel if you see or suspect that there is product in any monitoring well.
- Use the "Groundwater Sample Collection" form to collect all data during groundwater sampling.

Table 3: Groundwater Sampling Plan

Monitoring Well ID	Field Parameter Measurement	Groundwater Analyses to be Requested	Duplicate Samples	QA/QC Samples
BH20-1	pH, EC and temp.	1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH	None	Field and Trip blank sample
BH20-2		1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH		
BH20-3		1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH		
BH20-4		1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH		
BH20-5		1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH		
BH20-6		1 x Metals & ORP 1 x PHC F1-F4 + BTEX 1 x VOC 1 x PAH 1 x PCB	1 x PHC F1-F4 + BTEX 1 x VOC	

SURVEYING

- Survey to be completed using manual or Laser level (or equivalent) for obtaining the coordinates of the new borehole locations
- Use provided plan of survey to tie out elevations to a know local benchmark.

CHAIN-OF-CUSTODY

Chain-of-Custody Item	Information
Analytical Laboratory	AGAT
Generic Site Condition Standards	Table 2 residential property use, medium to fine textured soil (but ensure analysis to Table 1 as well)
Use Record of Site Condition analytical procedures?	Yes
Turn-around Time	Regular
Golder Reporting Contact	dstabile@golder.com

Chain-of-Custody Item	Information
Project-Specific Quote Number (if applicable)	None
Golder Billing Contact	AP_Customerservice@golder.com
Is an EQuIS EDD Required?	No

MANAGEMENT OF INVESTIGATION DERIVED WASTE

- Place all soil cuttings, development water and purge water in drums if deemed contaminated, otherwise please on the surface. If soil is contaminated, keep waste soil and water segregated into separate drums
- Label drums for waste management purposes, project number, date and drum contents (soil, purge water)
- Discuss best location to store drums with site contact
- Record inventory of waste containers on Daily Log

SPECIAL INSTRUCTIONS

- Check in with Daniel at start and end of each day and following drilling of each borehole (prior to well installation)
- Give field file to Daniel in Whitby or scan and save all project related files into the SharePoint site at:
<https://golderassociates.sharepoint.com/:f:/r/sites/123368/Project%20Files/5%20Technical%20Work/3000%20-%20Phase%20Two%20ESA/Field%20Work?csf=1&e=t7qtlB>

DS/TAM

[https://golderassociates.sharepoint.com/sites/123368/Project Files/6 Deliverables/3000 - Phase Two ESA/Final/Appendix D - Sampling and Analysis Plan/20139596 SAP 20'05'03 Ph Two](https://golderassociates.sharepoint.com/sites/123368/Project%20Files/6%20Deliverables/3000%20-%20Phase%20Two%20ESA/Final/Appendix%20D%20-%20Sampling%20and%20Analysis%20Plan/20139596%20SAP%2005'03%20Ph%20Two%20-%20Phase%20Two%20ESA/Field%20Work?csf=1&e=t7qtlB)
 683 Warden Ave DRAFT.docx

APPENDIX E

Record of Borehole Sheets

PROJECT: 20139596

LOCATION: See Figure 4

RECORD OF BOREHOLE: 20-1

SHEET 1 OF 2

BORING DATE: March 10, 2020

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □		WATER CONTENT PERCENT			
							ND = Not Detected		Wp ——— W ——— WI			
0	CME 75 TRACK MOUNTED 90 mm Mud Rotary Drilling	GROUND SURFACE		147.02								
		FILL - (ML) sandy SILT, trace to some gravel; brown, trace rootlets; non-cohesive, moist, very loose to compact		0.00	1	SS	4	ND				
1												
			2	SS	9	ND						
2												
		(ML) sandy SILT, trace gravel; brown (TILL), oxidization staining; non-cohesive, moist, compact to dense		144.81	3	SS	14	ND				
			4	SS	33	ND						
3												
		(CL) SILTY CLAY, some sand, trace gravel; grey (TILL); cohesive w~PL, stiff to very stiff										
	5		SS	24	ND							
4												
	(CL-ML) SILTY CLAY to CLAYEY SILT, some sand, trace gravel; grey (TILL); cohesive, w~PL, hard		142.91	6	SS	14	ND					
5												
			4.11	7	SS	21	ND					
6												
7												
			139.86	8	SS	50/ 0.08	ND					
8												
9												
			7.16	9	SS	50/ 0.13	ND					
10												

DEPTH SCALE

1 : 50

**GOLDER**

LOGGED: RP

CHECKED: AD

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PROJECT: 20139596

RECORD OF BOREHOLE: 20-1

SHEET 2 OF 2

LOCATION: See Figure 4

BORING DATE: March 10, 2020

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION					
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT								
								ND = Not Detected				Wp ——— W ——— WI								
								100	200	300	400			10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³			
								100	200	300	400			10	20	30	40			
10	CME 75 TRACK MOUNTED 90 mm Mud Rotary Drilling	— CONTINUED FROM PREVIOUS PAGE — (ML) sandy SILT; grey; non-cohesive, slight plasticity, moist to wet, very dense		9.98																
11					10	SS	50/ 0.13	ND												
12					11	SS	50/ 0.10	ND												
13																				
14																				
15																				
16		END OF BOREHOLE		131.65 15.37	13	SS	50/ 0.13	ND												
		NOTES: 1. Borehole open upon completion of drilling. 2. Groundwater level measured in monitoring well as follows: Date Depth(m) Elev. (m) 23/03/2020 7.79 139.2 26/03/2020 7.71 139.3																		
17																				
18																				
19																				
20																				

DEPTH SCALE

1 : 50



GOLDER

LOGGED: RP

CHECKED: AD

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PROJECT: 20139596

LOCATION: See Figure 4

RECORD OF BOREHOLE: 20-2








SHEET 1 OF 2

BORING DATE: March 11, 2020

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □	WATER CONTENT PERCENT Wp — W — WI				
0		GROUND SURFACE		146.36 0.00									
	CME 75 TRACK MOUNTED 90 mm Mud Rotary Drilling	FILL - (CL) sandy SILTY CLAY, trace gravel; brown, trace rootlets and organic material; cohesive, w~PL, firm			1	SS	7	ND			METALS ORP	50 mm Diameter Monitoring Well	
1						2	SS	8	ND				
			(ML) sandy SILT, trace gravel; brown (TILL), oxidation staining; non-cohesive, moist, compact									Bentonite Seal	
2						3	SS	22	ND				
		(CL) SILTY CLAY, some sand, trace gravel; brown (TILL), oxidation staining; cohesive, w~PL, very stiff			4	SS	27	ND			PHC, VOC, PAH		
3					5	SS	21	ND					
		(ML) sandy SILT, trace gravel; brown (TILL); non-cohesive, moist to wet, dense to very dense									Silica Sand Filter		
4					6	SS	21	ND					
		(ML) SILT to sandy SILT; brown to grey; non-cohesive, moist to wet, very dense									March 26, 2020		
5					7	SS	35	ND					
		(ML) SILT to sandy SILT; brown to grey; non-cohesive, moist to wet, very dense											
6					8	SS	52/ 0.13	ND					
		(ML) SILT to sandy SILT; brown to grey; non-cohesive, moist to wet, very dense											
7					9	SS	50/ 0.08	ND					
8													
9													
10													
CONTINUED NEXT PAGE													

DEPTH SCALE

1 : 50

**GOLDER**

LOGGED: RP

CHECKED: AD

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PROJECT: 20139596

LOCATION: See Figure 4

RECORD OF BOREHOLE: 20-2

SHEET 2 OF 2

BORING DATE: March 11, 2020

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □		WATER CONTENT PERCENT				
								ND = Not Detected		Wp — W — Wi				
								100 200 300 400	10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³					
								100 200 300 400	10 20 30 40					
10	CME 75 TRACK MOUNTED 90 mm Mud Rotary Drilling	— CONTINUED FROM PREVIOUS PAGE — - Becomes grey at a depth of about 10.0 m (ML) SILT to sandy SILT; brown to grey; non-cohesive, moist to wet, very dense												
11				10	SS	50/0.08	ND							MH
12				11	SS	50/0.13	ND							
13														
14														
15														
16		END OF BOREHOLE		130.74										
		NOTES:		15.62										
17		1. Borehole open upon completion of drilling.												
		2. Groundwater level measured in monitoring well as follows:												
		Date Depth(m) Elev. (m)												
		23/03/2020 7.06 139.3												
		26/03/2020 7.10 139.3												
18														
19														
20														

DEPTH SCALE

1 : 50

**GOLDER**

LOGGED: RP

CHECKED: AD

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PROJECT: 20139596

RECORD OF BOREHOLE: 20-3

SHEET 1 OF 2

LOCATION: See Figure 4

BORING DATE: March 11, 2020

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected	HYDRAULIC CONDUCTIVITY, k, cm/s	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT ELEV. DEPTH (m)	NUMBER	TYPE	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected	WATER CONTENT PERCENT Wp — W — Wi		
0		GROUND SURFACE	146.79 0.00			100 200 300 400	10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³		
		FILL - (CL) sandy SILTY CLAY, trace gravel; brown, trace rootlets and organic matter; cohesive, w~PL, soft to firm		1	SS	5 ND	○		50 mm Diameter Monitoring Well
1				2	SS	5 ND	○	METALS, ORP	
2				3	SS	4 ND	○		
		(SM/ML) SILTY SAND to sandy SILT, trace to some gravel; brown (TILL), oxidation staining; non-cohesive, moist, compact to very dense	144.58 2.21	4	SS	25 ND	○		Bentonite Seal March 26, 2020
3				5	SS	41 ND	○		MH
4				6	SS	67 ND	○		
5				7	SS	47 ND	○		
6		(CL-ML) SILTY CLAY to CLAYEY SILT, trace gravel; grey (TILL); cohesive, w~pL to w<pL, hard	141.15 5.64	8	SS	73/0.23 ND	○		Silica Sand Filter
7				9	SS	50/0.1 ND	○	PHC, VOC, PAH	
8									
9		(ML) SILT, trace sand; grey; non-cohesive, slight plasticity, moist to wet, very dense to dense	138.23 8.56						Bentonite Seal
10									

CONTINUED NEXT PAGE

DEPTH SCALE

1 : 50



LOGGED: RP

CHECKED: AD

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LOCATION: See Figure 4

SHEET 2 OF 2

BORING DATE: March 11, 2020

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

1 : 50



GOLDER

LOGGED: RP

CHECKED: AD

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PROJECT: 20139596

LOCATION: See Figure 4

RECORD OF BOREHOLE: 20-4

BORING DATE: Mar 09, 2020

SHEET 1 OF 2

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] ND = Not Detected	WATER CONTENT PERCENT Wp — W — WI	10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³			
0		GROUND SURFACE		146.00 0.00								
	CME 75 TRACK MOUNTED 90 mm Mud Rotary Drilling	FILL - (SP/GP) SAND and GRAVEL, some fines; brown; non-cohesive, moist, loose			1	SS	5	ND			METALS, ORP	50 mm Diameter Monitoring Well
1		FILL - (CL) sandy SILTY CLAY, trace gravel; brown and grey, trace organic matter, cohesive, w~pL, firm		145.31 0.69	2	SS	7	ND				
2					3	SS	6	ND				
		(ML) sandy CLAYEY SILT, trace gravel; brown to grey (TILL); cohesive, w~pL to w<pL, very stiff		143.79 2.21	4	SS	20	ND				
3												
					5	SS	28	ND				
4												
		- Becomes grey at a depth of about 4.1 m			6	SS	22	ND				
5												
		(SM/ML) SILTY SAND to sandy SILT, trace to some gravel; grey (TILL); non-cohesive, moist, dense to very dense		140.36 5.64	7	SS	33	ND			PHC, VOC, PAH	Bentonite Seal
6												
7												
8				8	SS	43	ND					
9												
				9	SS	50/ 0.13	ND					
10												

DEPTH SCALE

1 : 50



GOLDER

LOGGED: RP

CHECKED: AD

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PROJECT: 20139596

RECORD OF BOREHOLE: 20-4

SHEET 2 OF 2


LOCATION: See Figure 4

BORING DATE: Mar 09, 2020

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected	HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION						
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected										
								WATER CONTENT PERCENT										
							100	200	300	400	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³				
											Wp	W		Wi				
							100	200	300	400	10	20	30	40				
10	CME 75 TRACK MOUNTED 90 mm Mud Rotary Drilling	— CONTINUED FROM PREVIOUS PAGE — (ML) SILT to sandy SILT, trace gravel; grey; non-cohesive, slight plasticity, wet, very dense		9.98														
				10	SS	50/ 0.05	ND											
11																		Bentonite Seal
12					11	SS	50/ 0.05	ND										
13																		
14				12	SS	50/ 0.10											Silica Sand Filter	
15																		
16		END OF BOREHOLE		130.15 15.85														
17		NOTES: 1. Borehole open upon completion of drilling. 2. Groundwater level measured in monitoring well as follows: Date Depth(m) Elev. (m) 23/03/2020 4.44 141.6 26/03/2020 4.40 141.6																
18																		
19																		
20																		

DEPTH SCALE

1 : 50

**GOLDER**

LOGGED: RP

CHECKED: AD

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PROJECT: 20139596

LOCATION: See Figure 4

RECORD OF BOREHOLE: 20-5






BORING DATE: Mar 12, 2020

SHEET 1 OF 2

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION				
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT							
								ND = Not Detected				Wp — W — Wi							
								100	200	300	400			10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
								100	200	300	400			10	20	30	40		
0		GROUND SURFACE		145.80															
	CME 75 TRACK MOUNTED 90 mm Mud Rotary Drilling	FILL - (CL) sandy SILTY CLAY, trace to some gravel; brown and grey, trace organic matter; cohesive, w>pL, soft to firm		0.00															
1				1	SS	4	ND												
		2	SS	6	ND														
2		3	SS	5	ND														
			(ML) sandy SILT, trace gravel; brown (TILL), oxidation staining; non-cohesive, moist, compact		143.59														
		2.21																	
		4			SS	15	ND												
3																			
4																			
		(CL-ML) SILTY CLAY TO CLAYEY SILT, some sand, trace gravel; grey (TILL); cohesive, w<pL, hard		141.69															
	4.11																		
	6			SS	32	ND													
5																			
6																			
		(ML) sandy SILT, trace gravel; grey (TILL); non-cohesive, moist, dense		140.16															
	5.64																		
7																			
8																			
		(SM/ML) SILTY SAND to sandy SILT; trace gravel; grey; non-cohesive, slight plasticity, wet, very dense		138.64															
	7.16																		
	8			SS	80/0.28	ND													
9																			
10																			

CONTINUED NEXT PAGE

DEPTH SCALE

1 : 50

**GOLDER**

LOGGED: RP

CHECKED: AD

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PROJECT: 20139596

RECORD OF BOREHOLE: 20-5

SHEET 2 OF 2


LOCATION: See Figure 4

BORING DATE: Mar 12, 2020

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕	HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION				
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □								
								WATER CONTENT PERCENT								
								10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³					
								Wp	W		Wi					
								100	200	300	400					
								10	20	30	40					
10	CME 75 TRACK MOUNTED 90 mm Mud Rotary Drilling	— CONTINUED FROM PREVIOUS PAGE — (SM/ML) SILTY SAND to sandy SILT; trace gravel; grey; non-cohesive, slight plasticity, wet, very dense														
11					10	SS	50/ 0.05	ND							Bentonite	
12					11	SS	50/ 0.05	ND								Sand
13																
14					12	SS	73/ 0.05	ND								Screen and Sand
15																
16		END OF BOREHOLE		129.95 15.85												
17		NOTES: 1. Borehole open upon completion of drilling. 2. Groundwater level measured in monitoring well as follows: Date Depth(m) Elev. (m) 23/03/2020 5.23 140.6 26/03/2020 5.93 139.9														
18																
19																
20																

DEPTH SCALE

1 : 50



GOLDER

LOGGED: RP

CHECKED: AD

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PROJECT: 20139596

RECORD OF BOREHOLE: 20-6

SHEET 1 OF 1



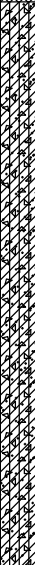
LOCATION: See Figure 4

BORING DATE: March 9, 2020

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION						
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT									
								ND = Not Detected				Wp — W — Wi									
								100	200	300	400			10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³				
								100	200	300	400			10	20	30	40				
0		GROUND SURFACE		146.70																	
	CME 75 TRACK MOUNTED 140 mm Hollow Stem Augers	FILL - (CL) SILTY CLAY, some sand, some gravel; brown; cohesive, w>pL, very soft to stiff																			
				1	SS	2	ND														
1				2	SS	8	ND														
			FILL - (SP/GP) SAND and GRAVEL, some fines; brown; non-cohesive, moist, compact to very dense																		
2		3			SS	22	ND														
		4			SS	50	ND														
3																					
4																					
		(CL-ML) sandy SILTY CLAY to CLAYEY SILT, trace gravel; grey (TILL); cohesive, w~pL, very stiff to hard																			
5	6			SS	18	ND															
6																					
7																					
8		END OF BOREHOLE		138.83																	
				7.87																	
9		NOTES: 1. Borehole open upon completion of drilling. 2. Groundwater level measured in monitoring well as follows: Date Depth(m) Elev. (m) 23/03/2020 1.71 145.0 26/03/2020 1.57 145.1																			
10																					

DEPTH SCALE

1 : 50



GOLDER

LOGGED: RP

CHECKED: AD

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PROJECT: 20139596

LOCATION: See Figure 4

RECORD OF BOREHOLE: 20-7

SHEET 1 OF 1

BORING DATE: March 9, 2020

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT	
								ND = Not Detected				Wp — W — Wi	
		GROUND SURFACE		146.50									
0	CME 75 TRACK MOUNTED 140 mm Hollow Stem Augers	TOPSOIL		0.00 0.10									
		FILL - (CL) SILTY CLAY, some sand, trace gravel; brown, trace rootlets; cohesive, w>pL, firm			1	SS	7				METALS ORP		
1		FILL - (SP/GP) SAND and GRAVEL, some fines; brown; non-cohesive, moist, compact		145.81 0.69		2	SS	14					
		(SM/ML) SILTY SAND to sandy SILT, trace gravel; brown to grey (TILL); non-cohesive, moist, compact to very dense		145.05 1.45		3	SS	18			PHC, VOC, PAH		
2													
						4	SS	39					
3						5	SS	71/ 0.28					
			- Becomes grey at a depth of 3.4 m										
4						6A 6B	SS	84 84					
5													
6													
					7	SS	44			MH			
7		(CL-ML) SILTY CLAY to CLAYEY SILT, some gravel; grey (TILL); cohesive, w<pL, hard		139.34 7.16									
8					8	SS	38						
		END OF BOREHOLE		138.27 8.23									
9		NOTE: 1. Borehole open upon completion of drilling.											
10													

DEPTH SCALE

1 : 50

**GOLDER**

LOGGED: RP

CHECKED: AD

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