PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

217 & 227 Cross Avenue, and 571 Argus Road, Oakville, Ontario

Client

Mr. Clarence Zichen Qian
Oakville Argus Cross LP
1-90 Wingold Avenue
Toronto, Ontario
M6B 1P5

Project Number

BIGC-ENV-349B

Prepared By:

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Executive Summary

B.I.G. Consulting Inc. (BIG) was retained by Mr. Clarence Zichen Qian on behalf of Oakville Argus Cross LP (Client), to complete a Phase Two Environmental Site Assessment (ESA) at the property located at 217 & 227 Cross Avenue, and 571 Argus Road, in Oakville, Ontario (the Site).

This Phase Two ESA was conducted in accordance with the Phase Two ESA standard defined by Ontario Regulation 153/04 (O.Reg.153/04), as amended.

The objective of the Phase Two ESA was to assess the areas of potential environmental concern (APECs) identified in the Phase One ESA completed by BIG in January 2021; and, to obtain soil and groundwater data to characterize the Site to support the filing of a Record of Site Condition (RSC) on the Ontario Ministry of the Environment, Conservation and Parks (MECP) Brownfields Environmental Site Registry (BESR).

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

1. The general stratigraphy at the Site, as revealed in the borehole logs, consists of a surficial material consisting of asphalt, granular or topsoil underlain by fill materials comprised of clayey silt and sandy silt, followed by native materials comprised of clayey silt till with trace gravels and shale fragments. Below native soil was a highly weathered shale bedrock with interbedded limestone which was encountered in all boreholes.
2. The groundwater depths across the entire Site ranged between approximately 1.72 m and 4.77 m below ground surface (bgs) in shallow wells and 17.91 to 21.09 m bgs in the deep wells on February 08, 2021.
3. The soil analytical results indicated that select parameters were detected at concentrations above the applicable MECP (2011) Table 2 Site Condition Standards in a Potable Groundwater Condition for Residential/Parkland/Institutional land use and coarse textured soils were:

Parameter	MECP (2011a) Table 2 SCS	Number of Soil Samples Submitted	Number of Soil Samples Exceeding the applicable SCS	Maximum concentration detected
Metals				
Copper	140 µg/g	17	2	493 µg/g

4. The groundwater analytical results indicated that all groundwater samples submitted for PHCs, BTEX, VOCs, PAHs, metals and inorganics analyses were either non-detected or detected below the applicable MECP (2011) Table 2 SCS; and all laboratory RDLs were below the applicable SCS.

Conclusions and Recommendations

The soil COC present at the Site comprised of copper at concentrations in exceedance of the MECP Table 2 Site Condition Standards for coarse textured soil in BH101 and BH106. Based on the former activities on-Site, the impacts are likely associated with the importation of fill material of unknown quality.

In order to proceed with the Record of Site Condition (RSC), the following is recommended:

1. Vertically and laterally delineate the copper exceedances identified in BH101 and BH106.
2. Excavate the impacted soil and dispose of off Site at a registered landfill facility.
3. Conduct confirmatory soil sampling.
4. Prepare a report documenting remedial activities.
5. Update Phase Two ESA.
6. File RSC.

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1 Introduction

B.I.G. Consulting Inc. (BIG) was retained by Mr. Clarence Zichen Qian on behalf of Oakville Argus Cross LP (Client), to complete a Phase Two Environmental Site Assessment (ESA) at the property located at 217 & 227 Cross Avenue, and 571 Argus Road, Oakville, Ontario (the Site).

The objective of the investigation was to support the filing of a Record of Site Condition (RSC) in accordance with Ontario Regulation 153/04 (O.Reg.153/04), as amended. It is BIG's understanding that the Client is planning on redeveloping the Site with a mid-rise residential building in the future, which would require a land use change and a Record of Site Condition (RSC). Contact information for the Client is provided in Section 1.2.

The objective of the Phase Two ESA was to assess the areas of potential environmental concern (APECs) identified in the Phase One ESA completed by BIG in January 2021 and, to obtain soil and groundwater data to characterize the Site to support the preparation of the filing of an RSC on the Ontario Ministry of the Environment, Conservation and Parks (MECP) Brownfields Environmental Site Registry (BESR).

1.1 Site Description

The Site is located to the south of the Queen Elizabeth Way, north of Cross Avenue and east of Argus Road in Oakville, Ontario, as shown on Figure 1. The Site measures 8,779 m² in size. The Site is currently occupied by three (3) restaurants; McDonalds, Swiss Chalet and Harveys with associated asphalt car parking with an undeveloped portion of the Site at 571 Argus Road.

The Site is bordered by commercial properties to the north east and north west, Argus Road to the south west and Cross Ave to the south east. The surrounding properties are shown on Figure 1.

1.2 Legal Description and Property Ownership

Information regarding the Site identification is provided in the table below:

Site Details	
Municipal Addresses	217, 227 Cross Avenue and 571 Argus Road, Oakville, Ontario
Current Owner	Distrikt Capital
Owner Address	1-90 Wingold Avenue, Toronto, Ontario, M6B 1P5
Owner Contact Person	Clarence Zichen Qian
Legal Description	• 217 Cross Avenue - Part Lot 13, 14, concession 3 Trafalgar, South of Dundas Street, Town of Oakville. • 227 Cross Avenue - Part Lot 13, Concession 3 Trafalgar, South of Dundas Street, Town of Oakville. • 517 Argus Road - Part Lots 13 & 14, Concession 3 Trafalgar South of Dundas Street, Town of Oakville
Property Identification Numbers (PINs)	217 Cross Avenue - 24816-0044 (LT) 227 Cross Avenue - 24816-0043 (LT) 571 Argus Road - 24816-0114 (LT)
Property Size	8,779 m²
Approximate Universal Transverse Mercator (UTM) coordinates	Zone: 17 Easting: 606480 Northing: 4812428 (1m, NAD83, QGIS)

1.3 Current and Proposed Future Uses

At the time of the Phase Two ESA investigation, the Site was zoned for commercial land use. And is used for commercial purposes. The proposed redevelopment of the Site will include two (2) residential condominium towers with six (6) levels of underground parking. Section 168.3.1 of the *Environmental Protection Act* does not prohibit the proposed future use of the Property. Current surrounding land uses are provided in Figure 3.

1.4 Applicable Site Condition Standards

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

Tables 1 to 9 of MECP are summarized as follows:

a) Table 1 - applicable to sites where background concentrations must be met (full depth), such as sensitive sites where site-specific criteria have not been derived;
b) Table 2 - applicable to sites with potable groundwater and full depth restoration;
c) Table 3 - applicable to sites with non-potable groundwater and full depth restoration;
d) Table 4 - applicable to sites with potable groundwater and stratified restoration;
e) Table 5 - applicable to sites with non-potable groundwater and stratified restoration;
f) Table 6 - applicable to sites with potable groundwater and shallow soils;
g) Table 7 - applicable to sites with non-potable groundwater and shallow soils;
h) Table 8 - applicable to sites with potable groundwater and that are within 30 m of a water body; and,
i) Table 9 - applicable to sites with non-potable groundwater and that are within 30 m of a water body.

Application of the generic or background SCS to a specific site is based on a consideration of site conditions related to soil pH (i.e., surface and subsurface soil), thickness and extent of overburden material, (i.e., shallow soil conditions), and proximity to an area of environmental sensitivity or of natural significance. For some chemical constituents, consideration is also given to soil textural classification with SCS having been derived for both coarse and medium/fine textured soil conditions.

For assessment purposes, BIG selected the MECP Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential Property Use and coarse textured soil. The selection of this category was based on the following factors:

a) More than two-thirds of the Site has an overburden thickness greater than 2 m.
b) The Site is not located within 30 m of a surface water body or an area of natural significance.
c) The soil at the Site has a pH value between 5 and 9 for surficial soils; and, between 5 and 11 for subsurface soils.
d) The property is not within an area of natural significance; does not include, nor is it adjacent to an area of natural significance, nor is it part of such an area; and, it does not include land that is within 30 m of an area of natural significance, nor is it part of such an area.

e) The Site is considered as potable for the following reasons: The Site is located within an area designated in a municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater. The property, and all other properties located, in whole or in part, within 250 m of the boundaries of the property are supplied by a municipal drinking water system, as defined in the *Safe Drinking Water Act, 2002.*

f) The future land use of the Site is residential.

g) The predominant soil type on the Site was considered to be coarse textured.

h) There was no intention to carry out a stratified restoration at the Site.

2 Background Information

2.1 Physical Setting

The following physiographic, geological and soil maps were reviewed as part of this Phase Two ESA:

a) Atlas of Canada – Toporama Topographic Map, 2012 (Toporama).
b) Ontario Base Map (OBM).
c) Ontario Ministry of Northern Development and Mines website, Bedrock Geology of Ontario, 2011 – MRD 126; and Paleozoic Geology of Southern Ontario, 2007 – MRD 219 (KML format).
d) Ontario Ministry of Northern Development and Mines website, Surficial Geology of Southern Ontario, 2010. (KML format).
e) Ontario Ministry of Northern Development and Mines website, Physiography of Southern Ontario 2007.

The following information was obtained from these maps:

The Site has an elevation of approx. 102 m above sea level (asl), similar elevation to surrounding properties.

a) The physiography of the site is within the Iroquois Plains characterized as the Shale Plains.
b) The surficial geology of the Site is described as a Paleozoic Bedrock.
c) The bedrock in the general area of the Site consists of shale, limestone, dolostone and siltstone of the Georgian Bay formation; Blue Mountain formation; Billings formation, Collingwood Member and Eastview member.
d) No water bodies are located on the Site. The nearest water body is a tributary to Morrison Creek which is located approximately 335 m east and Lake Ontario is located approximately 2.0 km to the southeast.
e) Based on the review of available resources from the City of Toronto and the Ministry of Natural Resources and Forestry (MNRF) on January 29, 2021, no areas of natural significance were identified at the Site or within the Phase I Study Area.

2.2 Past Environmental Investigations

Previous environmental investigations have been conducted at the Site, including two (2) hydrogeological investigations, a Phase II environmental site assessment (ESA) and a Phase One ESA.

The following environmental investigation was reviewed in support of this Phase Two ESA report:

1. Terrapex (2018) Phase I and Phase II Environmental Site Assessment, 217 Cross Avenue and 571 Argus Road, Oakville, Ontario. Terrapex Environmental Ltd. September 28, 2018.
2. BIG (2019) Preliminary Geotechnical Investigation, 217 Cross Avenue and 571 Argus Road, Oakville Ontario. B.I.G Consulting Inc., December 3, 2019.
3. BIG (2020) Draft Phase One Environmental Site Assessment, 227 Cross Avenue Road, Oakville Ontario. B.I.G Consulting Inc., December 22, 2020.

A summary of previous investigations is provided below:

Terrapex (2019) Phase I and II ESA	
Objective	PGL assessed groundwater conditions at the Site and potential impacts on groundwater from dewatering during the excavation and operation of the Site

Terrapex (2019) Phase I and II ESA	
Potential Environmental Concerns Identified	1. Possible presence of Polychlorinated biphenyls (PCBs) in surface soils in the vicinity of a transformer located on-site; 2. Possible fill of unknown quality used for grading purposes on-site 3. Possible soil and groundwater contaminant migration from off-site sources.
Field Program	1. Advancement of five (5) boreholes (MW101, MW102, BH103, MW104, MW105, and BH106) up to a maximum depth of 3.05 m below ground surface (bgs). 2. Installation of four (4) monitoring wells (MW101, MW102, MW104, and MW105). 3. Soil samples submitted for the analyses of petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), metals and inorganics. 4. Groundwater samples submitted for the analyses of PHCs, VOCs, metals and inorganics.
Site Condition Standards	MECP (2011) Table 2 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for industrial/commercial/community (ICC) property use with coarse textured soil.
Groundwater Observations	Measured at a depth of between 2.29 – 2.45 mbgl (September 2018).
Soil Conditions	Below SCS, with exception of Sodium adsorption ratio (SAR) exceeded the Table 2 SCS at MW105-1a.
Groundwater Conditions	Below SCS except for Chloride at MW105 and Sodium at MW104 and MW105 (Table 2 SCS).

Terrapex (2019) Phase I Environmental Site Assessment Update	
Objective	To verify that no significant changes occurred within the Site or surrounding areas since the Phase I and II were conducted.
Potential new environmental impacts identified	A de-greasing tank within the kitchen area of the restaurant, which is used to clean large stainless steel cooking utensils and equipment parts (i.e. rotisserie spits, vent hood). The degreasing tank was installed within the last year and is maintained and cleaned by a third party, every two weeks. No signs of leakage or staining were observed, and the tank appeared to be in excellent conditions
Conclusions	The Phase I ESA update work program did not identify any evidence to suggest that, since the report date of the previous Phase I and II ESAs, there is any new or materially changed potential environmental concerns at the Site.

BIG (2019) Geotechnical Investigation	
Objective	Investigate subsurface conditions for the Site and give geotechnical recommendations and identify potential geotechnical hazards.
Field Program	• Advancement of six (6) boreholes (BH1 to BH6) the depths ranged between 2.3 m to 17.7 m bgs. • BH3, BH4 and BH6 had piezometers installed for long term groundwater level observations.

BIG (2019) Geotechnical Investigation	
Site Stratigraphy	• The general stratigraphy at the site consists of topsoil or asphalt, granular fill, fill, silty to clayey silt, glacial till deposits overlying shale bedrock conditions. • Shale was encountered at depths ranging between 1.8 to 3.1 m bgs.
Groundwater Observations	• Measured at a depth of between 1.7 m to 3.6 m bgs (November 29, 2019)

BIG (2020) Draft Phase One Environmental Site Assessment	
Objective	The objectives of the project were to identify actual and potential sources of contamination at the Site associated with current and/or historical activities at the Site and on neighboring properties; and, to investigate the potential for soil and groundwater impacts at the Site related to the historical and current use of the Site and adjacent properties. Note, this report is focused on a portion of the Site (227Cross Ave), not the entire Site.
Potential Environmental Concerns Identified	On-site • De-icing salt usage (Soil and groundwater EC, SAR, sodium and chloride) • Unknown fill material (Soil and groundwater PAHs, metals and inorganics) Potential impacts on Site from surrounding properties • Eastern Portion - current dry cleaner (Groundwater VOCs) • Western Portion– Tannery (Groundwater – VOCs, PAHs) • Eastern Portion – Gasoline Service Station- (Groundwater - PHCs, BTEX) • Eastern Portion – Commercial Autobody Shop (Groundwater - PHCs, BTEX) • Eastern Portion – Transformer (Groundwater – PCBs)
Conclusions and Recommendations	Conduct a Phase II ESA consisting of borehole drilling and monitoring well installation including soil and groundwater sampling to assess the soil and groundwater quality to investigate identified potential on-Site and off-Site sources of environmental concern at the Site.

3 Scope of the Investigation

3.1 Overview of Site Investigation

The objective of the Phase Two ESA was to assess the APECs identified in BIG's Phase One ESA; and, to obtain soil and groundwater data to characterize the Site to support the filing of an RSC on the MECP's BESR.

3.1.1 Scope of Work

The scope of work for the Phase Two ESA was as follows:

a) Request public utility locating companies (e.g., cable, telephone, gas, hydro, water, sewer and storm water) to mark any underground utilities present at the Site;
b) Advance a total of fifteen (15) boreholes (BH101 to BH115) up to a maximum depth of 23.4 m bgs;
c) Instrument all fifteen (15) boreholes as monitoring wells (MW101 to MW115);
d) Collect representative soil samples for laboratory chemical analysis of PHCs, benzene, toluene, ethylbenzene and xylenes (BTEX), VOCs, PAHs, metals and inorganics.
e) Develop both the previously and newly installed groundwater monitoring wells;
f) Collect groundwater levels from both the previously and newly installed monitoring wells;
g) Collect groundwater samples from both the previously and newly installed monitoring wells for laboratory chemical analysis of PHCs, BTEX, VOCs, PAHs, metals and inorganics;
h) Complete an elevation survey of all newly installed monitoring wells to determine the groundwater flow direction in the overburden aquifer beneath the Site;
i) Analyze the data and prepare a report of the findings.

3.2 Media Investigated

The focus of the Phase Two ESA was on the environmental conditions of the surficial topsoil, overburden materials and groundwater beneath the Site. As there was no surface water body on the Site, no sediment sampling was required.

A copy of the Site Sampling and Analysis Plan (SSAP) prepared for the Site is provided in Appendix A.

3.3 Phase One Conceptual Site Model

This section presents the Phase One Conceptual Site Model (P1CSM) providing a narrative, graphical and tabulated description integrating information related to the Site geologic and hydrogeologic conditions, areas of potential environmental concern/potential contaminating activities, and the presence and distribution of potential contaminants of concern. These components are discussed in the following sections.

Surface Features

The Site is located to the south of the Queen Elizabeth Way, north of Cross Avenue and east of Argus Road Oakville, Ontario, as shown on Figure 1. The Site measures 8,779 m² in size (according to Site survey). The Site is currently occupied by three (3) restaurants; McDonalds, Swiss Chalet and Harveys with associated asphalt car parking with an undeveloped area at 571 Argus Road.

The legal description of the Site as obtained from the chain of title is "Part Lot 13, 14, concession 3 Trafalgar, South of Dundas Street, Town of Oakville. Part Lot 13, Concession 3 Trafalgar, South of Dundas Street, Town of Oakville. Part Lots 13 & 14, Concession 3 Trafalgar South of Dundas Street, Town of Oakville".

The legal survey plans are included in Appendix B.

Surrounding Land Use

The Site is bordered by commercial properties to the north east and north west, Argus Road to the south west and Cross Ave to the south east. A Site Plan is provided in Figure 1.

Geological and Hydrogeological Conditions

The Site is at an elevation of approximately 102 m above sea level (asl), generally at the same elevation as properties surrounding the Site.

The bedrock in the general area of the Site consists of shale, limestone, dolostone and siltstone of the Georgian Bay formation; Blue Mountain formation; Billings formation, Collingwood Member and Eastview member. The physiography of the site is within the Iroquois Plains characterized as the Shale Plains. The physiography of the site is within the Iroquois Plains characterized as the Shale Plains.

The nearest water body is a tributary to Morrison Creek which is located approximately 335 m east and Lake Ontario is located approximately 2.0 km to the southeast. The inferred groundwater flow direction is likely towards the south/southeast.

Based on the review of available resources from the City of Toronto and the Ministry of Natural Resources and Forestry (MNRF) on January 29, 2021, no areas of natural significance were identified at the Site or within the Phase One Study Area.

Underground Utilities

The Site utilities and services were identified at the Site based on the relevant utility infrastructure observed during the Site reconnaissance and are summarized in the table below. It is noted that the precise underground location of the utilities cannot be determined without professional locate services.

Utility	Source	Location	Site Entry
Storm Sewer	Town of Oakville	Entrance of Site	A catch basin is located at the entrance of Site as well throughout the parking lots.
Sanitary Sewer	Town of Oakville	Cross Avenue	A manhole in front of Site on Cross Avenue
Natural Gas	Enbridge Gas	South	Given that the Site is located in a mixed residential and commercial area, the natural gas lines are anticipated to run along Cross Avenue and Argus Road.
Electricity	Oakville Hydro	South	Overhead hydro lines were observed along Cross Avenue and Argus Road.

Potentially Contaminating Activities

The identification of the potentially contaminating activities (PCAs) both on-Site and off-Site within the Phase One study area are provided in Figure 3. Based on the rationale provided, it is the opinion of the Qualified Person (QP) that seven (7) PCAs are considered APECs at the Site. Further discussion is provided below.

The Phase One ESA conducted by BIG in 2021 identified the following PCAs:

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
1.	217 - 227 Cross Avenue and 571 Argus Road	De-icing salt usage (PCA#48 – Salt Manufacturing, Processing and Bulk Storage)	On-Site	Yes	On-Site
2.		Unknown Fill Material (PCA#30 – Importation of Fill Material of Unknown Quality)	On-Site	Yes	On-Site
3.	568 Argus Road	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (21 m west)	Yes	Located trans-gradient Adjacent
4.	570 Argus Road	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (21 m west)	Yes	Located trans-gradient Adjacent
5.		PCA#10 commercial auto body shops			
6.		PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks			
7.	572 Argus Road	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (21 m west)	Yes	Located trans-gradient Adjacent
8.	187 Cross Avenue	Former dry cleaner (PCA#37 – Operation of Dry Cleaning Equipment (Where Chemicals are Used))	Off-Site (29 m south west)	No	Inferred down-gradient
9.	233 Cross Avenue	Former dry cleaner (PCA#37 – Operation of Dry Cleaning Equipment (Where Chemicals are Used))	Off-Site (32 m east)	No	Located trans-gradient
10.		PCA#55 Transformer Manufacturing and Processing			
11.	185 Cross Avenue	Tanning (PCA#53 Tanning)	Off-Site (67 m south, south west)	No	Inferred down-gradient
12.	570 Trafalgar Road	(PCA#28 Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (75 m north, north east)	No	Inferred trans-gradient

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
13.	546 Cross Avenue	Former UST (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (80 m east)	No	Located trans-gradient
14.	218 Cross Avenue	Former service station (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (90 m south)	No	Inferred down-gradient
15.	562 Trafalgar Road	PCA#54 textile manufacturing and processing	Off-Site (124 m east)	No	Inferred trans-gradient
16.	165 Cross Avenue	PCA# 10 Commercial Autobody Shops	Off-Site (141 m south west)	No	Inferred down-gradient
17.	580 Argus Road	Former Paint Manufacturing (PCA#39 Paints Manufacturing, Processing and Bulk Storage)	Off-Site (150 m west)	Yes	Located trans-gradient Adjacent
18.	547 Trafalgar Road	(PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (159 m east)	No	Located trans-gradient
19.		(PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
20.	200 Cross Avenue	Former USTs (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (174 m south east)	No	Located down-gradient
21.	125 Cross Avenue	Former Leather Manufacturing (PCA#53 Tannery)	Off-Site (190 m west)	No	Located trans-gradient
22.		Former Tire and Rubber Manufacturing (PCA#47 Rubber Manufacturing and Processing)			
23.		Former Auto Body Shop (PCA#10 Commercial Auto Body Shops)			

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
24.		Former Dry Cleaner (PCA#37 Operation of Dry-Cleaning Equipment)			
25.		(PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
26.	148 Cross Avenue	(PCA#32 Iron and Steel Manufacturing and Processing)	Off-Site (206 m south, south west)	No	Located down-gradient
27.		Former USTs (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
28.	489 Trafalgar Road	Former service station (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (215 m south)	No	Located down-gradient
29.	2 Dundas Street North	(PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (215 m south)	No	Inferred down-gradient
30.	485 Trafalgar Road	Lumber Yard (PCA#59 wood treating, and preservative facility and bulk storage of treated and preserved wood products)	Off-Site (219 m east southeast)	No	Inferred down-gradient
31.		(PCA#39 Paints Manufacturing)			
32.		(PCA#43 Plastics (including Fibreglass) Manufacturing and Processing)			
33.		PCA#53 Tannery			
34.	166 South Service Road	Coal Yard (PCA#9 Coal Gasification)	Off-Site (226 m north west)	No	Inferred down-gradient
35.	590 Dundas North	Wood Yard (PCA#59 wood treating and preservative facility and bulk storage of treated and preserved wood products)	Off-Site (230 m south)	No	Inferred down-gradient

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
36.	151 Dundas North	(PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (230 m south)	No	Located down-gradient
37.	462 Trafalgar Road	(PCA #40 Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications)	Off-Site (230 m southeast)	No	Located down-gradient
38.		(PCA#28 Gasoline and Associated Products Storage in Fixed Tanks)			
39.	312 Davis Road	(PCA#28 Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (232 m northeast)	No	Inferred trans-gradient
40.	457 Reynolds Street	(PCA #40 Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications)	Off-Site (238 m east)	No	Inferred trans-gradient
41.		Former dry cleaner (PCA#37 operation of dry-cleaning equipment)			
42.	152 Cross Avenue	Former Autobody shop (PCA#10 Commercial Auto Body Shops)	Off-Site (239 m west)	No	Located trans-gradient
43.	142 Cross Avenue	Tire and Rubber (PCA#47 Rubber Manufacturing and Processing)	Off-Site (245 m west)	No	Inferred trans-gradient
44.	541 Dundas North	Tire and Rubber (PCA#47 Rubber Manufacturing and Processing)	Off-Site (250 m south)	No	Located down-gradient

Areas of Potential Environmental Concern

Based on the evaluation of the PCAs located on- and off-Site, seven (7) APECs were identified, as presented below:

Area of Potential Environmental Concern (APEC)[1]	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)[2]	Location of PCA (On-Site or Off-Site)[2]	Potential Contaminants of Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1: De-icing salt usage	Entire Site, excluding building footprints	PCA#48 – Salt Manufacturing, Processing and Bulk Storage	On-Site	Electrical Conductivity, SAR, Sodium and Chloride	Soil and Groundwater
APEC 2: Unknown fill materials	Entire Site, excluding building footprints	PCA#30 – Importation of Fill Material of Unknown Quality	On-Site	PAHs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-, low or high pH	Soil and Groundwater
APEC 3: Former Metal Fabrication	Western portion	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (west adjacent)	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-, low or high pH	Groundwater
APEC 4: Former Metal Fabrication	Western portion	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (west adjacent)	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-, low or high pH	Groundwater
APEC 5: Commercial Auto Body Shop	Western portion	PCA#10 commercial auto body shops	Off-Site (west adjacent)	VOCs, PHCs, BTEX	Groundwater
APEC 6: Automotive shop	Western portion	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks	Off-Site (west adjacent)	PHCs and BTEX	Groundwater
APEC 7: Former metal fabrication	Western portion	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (west adjacent)	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-, low or high pH	Groundwater

1. *Area of Potential Environmental Concern (APEC) means the area on, in or under a Phase One Study Area where one or more contaminants are potentially present, as determined through the Phase One ESA, including through:*
   a) identification of post or current uses on, in or under the phase one property, and
   b) identification of potentially contaminating activities.
2. *Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a Phase One Study Area.*
   PHCs = petroleum hydrocarbons; BTEX = benzene, toluene, ethylbenzene and toluene; VOCs = volatile organic compounds; PAHs = polycyclic aromatic hydrocarbons; As = arsenic, Sb = antimony, Se = selenium; Cr (VI) = chromium hexavalent; Hg = mercury; B-HWS = boron hot water soluble; CN- = cyanide; EC = electrical conductivity; SAR = sodium adsorption ratio

3.4 Deviations from Sampling and Analysis Plan

The field investigative and sampling program was carried out following the requirements of the SSAP, shown in Appendix A. No deviations from the SSAP were reported, which affected the sampling and data quality objectives for the Site.

3.5 Impediments

The entire Site was accessible at the time of the investigation, and no physical impediments were encountered during the field investigation.

4 Investigation Method

4.1 General

The Site investigative activities consisted of the drilling of fifteen (15) boreholes to facilitate the collection of soil samples for geologic characterization and chemical analysis; and, the installation of monitoring wells for hydrogeologic property characterization and the collection of groundwater samples for chemical analysis.

Boreholes were advanced in the surficial fill and overburden soils by a licensed drilling company under the full-time supervision of BIG staff. The drilling equipment used to advance the boreholes is described below. No petroleum-based greases or solvents were used during drilling activities. Monitoring wells were installed in the boreholes by a MECP licensed well contractor in accordance with Ontario Regulation 903/90, as amended (O.Reg.903) using manufactured well components (i.e., riser pipes and screens) and materials (i.e., sand pack and grout) from documented sources.

4.2 Borehole Drilling

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

The fieldwork for the soil investigative portion of the Phase Two ESA was carried out between January 13 to 26, 2021.

The boreholes were advanced by Canadian Soil Drilling under full-time supervision of BIG staff using a truck-mounted drill rig to a maximum depth of 23.4 m bgs to sufficiently assess the APECs identified in the Phase One ESA. The approximate locations of the boreholes and monitoring wells are shown on Figure 4.

BIG continuously monitored the drilling activities to record the physical characteristics of the soil, depth of soil sample collection and total depth of boreholes. Field observations are summarized on the borehole logs provided in Appendix C. Representative soil samples were recovered at regular intervals using a stainless-steel split spoon sampler in all boreholes.

4.3 Soil Sampling

Soil samples for geologic characterization and chemical analysis were collected on a discrete basis in the overburden materials using 5 cm diameter, 60 cm long, split spoon samples advanced in to the subsurface using a truck mounted drill rig. The soil cores were extruded from the samplers upon retrieval by drilling personnel. Geologic details of the recovered cores were logged by BIG field staff and samples were collected from selected cores for chemical analysis. Field observations are summarized on the borehole logs prepared from the field logs and provided in Appendix C.

Measures were taken in the field and during transport to preserve sample integrity prior to chemical analysis. Recommended volumes of soil samples selected for chemical analysis were collected from the recovered cores into pre-cleaned, laboratory-supplied glass sample jars/vials identified for the specified analytical test group. All soil samples were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratory, AGAT Laboratories (AGAT) of Mississauga, Ontario. The samples were transported/submitted within the acceptable holding time to AGAT following Chain of Custody protocols for chemical analysis.

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

and sampling of each retrieved soil core. Drill cuttings were placed in labeled, sealed drums upon completion of sampling. All fifteen (15) of the boreholes that were advanced were completed as monitoring wells (MW101 to MW115).

Soil samples submitted for specific chemical analysis were selected on the basis of visual inspection of the recovered cores, sample location and depth interval.

Geologic interpretation of the recovered soil cores from the boreholes are provided in boreholes logs provided in Appendix C.

4.4 Field Screening Measurements

A portion of each soil core was placed in a sealed "Ziploc®" plastic bag and allowed to reach ambient temperature prior to field screening using a MiniRae 3000 Photo Ionization Detection (PID) instrument, calibrated with isobutulene gas. The measurements were made by inserting the instrument's probe into the plastic bag while manipulating the sample to ensure volatilization of the soil gases. These readings provide a real-time indication of the relative concentration of combustible vapours encountered in the subsurface during drilling and are used to aid in the assessment of the vertical and horizontal extent of contamination and the selection of soil samples for analysis.

The field screening measurements, in parts per million (ppm) isobutylene equivalents, are presented on the borehole logs in Appendix C.

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

4.5 Groundwater: Monitoring Well Installation

Fifteen (15) boreholes were instrumented with groundwater monitoring wells at the Site (MW101 to MW115). The monitoring wells were installed in general accordance with the Ontario Water Resources Act - R.R.O. 1990, Regulation 903/90 - amended to O.Reg.128/03 and were installed by a licensed well contractor.

All monitoring wells consisted of a 3 m length, 32 mm diameter PVC screen, and an appropriate length of PVC riser pipe. All pipe connections were factory machined threaded flush couplings. The annular space around the wells was backfilled with sand to an average h of 0.3 m above the top of the screen. A bentonite seal was added from the top of the sand pack to approximately 0.3 m below ground surface.

When the monitoring wells are no longer required, they must be decommissioned in accordance with the procedure outlined in the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - amended to O.Reg.128/03. Monitoring well completion details are summarized in Table 3.

Measures taken to minimize the potential for cross contamination or the introduction of contaminants during well construction included:

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

4.6 Monitoring Well Development

Upon completion of monitoring well installation, the new monitoring wells were developed to remove fine sediment particles from the sand pack and enhance hydraulic communication with the surrounding formation waters. The monitoring wells were developed on February 1, 2021 using dedicated bailers and/ or submersible pump to disturb the water column and recover groundwater containing dislodged sediment particles.

4.7 Groundwater Monitoring

Groundwater monitoring activities, which consisted of measuring the depths to groundwater in each monitoring well, were conducted on newly installed monitoring wells so that groundwater flow and direction below the Site could be assessed and groundwater samples can be collected. These groundwater monitoring activities were conducted between February 1 - 3, 2021. Water levels were measured with respect to the top of casing by means of an electronic water level meter. The water level measurements were recorded on water level log sheets or in a bound field notebook. The water level meter probe was decontaminated between monitoring well locations.

4.8 Monitoring Well Purging

Monitoring wells were purged prior to groundwater sample collection. Approximately three (3) water column well volumes of water were purged from each well to remove standing water and draw in fresh formation water. Water levels and wetted well volumes were determined by means of an electronic water level meter.

Well purging was monitored by taking field measurements of turbidity, redox, pH, specific conductance and temperature and water level for every standing well (i.e., wetted casing) volume removed. Well purging continued until the purged water had chemically stabilized as indicated by field parameter measurements, and the water was of sufficient clarity as indicated by turbidity measurements. The groundwater was considered to be chemically stable when the pH measurements of three (3) successive purge well volumes agreed to within ± 1 pH units, the specific conductance within ± 10%, and turbidity ± 10% of the average value of the three readings with the temperature within ± 3%. Field parameters including pH, conductivity and temperature were monitored during monitoring well purging using a Hanna HI 9829 multiparameter water quality meter. All development water was collected and stored on-Site in labeled, sealed containers.

Equipment used during groundwater monitoring were thoroughly cleaned and decontaminated between wells. Well purging details were documented on a log sheet or in a bound hard cover notebook.

4.9 Field Measurements of Water Quality Parameters

Field parameters including pH, conductivity and temperature were monitored during well development using a calibrated Hanna HI 9829 multiparameter water quality meter.

4.10 Groundwater Sampling

Upon completion of purging, the newly installed monitoring wells MW101, 103, 104, 107, 108, 111, 112, 113 and 115, were sampled on February 3, 2021. Recommended groundwater sample volumes were collected into laboratory-supplied vials or bottles provided with analytical test group specific preservatives, as required. The samples were placed in an insulated cooler pre-chilled with ice immediately upon collection. The groundwater samples were transported to AGAT under Chain of Custody protocols, within 24 hours of sample collection or approved holding times. A summary of analysis is provided in the table below:

Soil Sample ID	Rationale	Requested Analyses	Consultant
MW101	APEC 1 & 2 characterization	PHCs, VOCs, metals and inorganics	BIG
MW103	APEC 1 & 2 characterization	Sodium & Chloride	BIG
MW104	APEC 1 & 2 characterization	PHCs, VOCs, PAHs	BIG
MW107	APEC 1 & 2 characterization	Sodium & Chloride	BIG
MW108	APEC 1 & 2 characterization	Metals and inorganics	BIG
MW111	APEC 3-8 characterization	PAHs	BIG
MW112	APEC 3-8 characterization	PHCs, VOCs, PAHs, metals and inorganics	BIG
MW113	APEC 3-8 characterization	PAHs	BIG
MW115	APEC 1 & 2 Characterization	Sodium & Chloride	BIG

4.11 Sediment Sampling

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

4.12 Analytical Testing

All analytical testing was performed by AGAT, which is an accredited laboratory. AGAT is accredited under the Standards Council of Canada/Canadian Association of Environmental Analytical Laboratories (Accredited Laboratory No. A3200) in accordance with ISO/IEC 17025:2005 - "General Requirements for the Competence of Testing and Calibration Laboratories".

4.12.1 Soil Sampling

Representative soil samples from each borehole were selected for laboratory analysis based on field screening results, sample location and depth interval. The requested laboratory analysis was based on the identified contaminants of concern. The representative soil samples selected for laboratory analysis, the rationale for each sample and the requested analyses are summarized below.

Table 2: Summary of Soil Samples Submitted for Chemical Analyses

Soil Sample ID	Rationale	Requested Analyses	Consultant
BH101-SS1	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH101-SS2	APEC 1 & 2 characterization	PHCs and VOCs	BIG
BH102-SS1	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH102-SS2	APEC 1 & 2 characterization	PHCs and VOCs	BIG
BH103-SS1	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH104-SS1	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH105-SS1	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH105-SS3	APEC 1 & 2 characterization	PHCs and VOCs	BIG
BH106-SS1	APEC 1 & 2 characterization	PHCs and VOCs	BIG
BH106-SS2	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH107-SS1	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH108-SS1	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH109-SS1	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH110-SS1	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH110-SS2	APEC 1 & 2 characterization	PHCs and VOCs	BIG
BH111-SS1	APEC 3-8 characterization	PAHs, metals and inorganics	BIG
BH112-SS1	APEC 3-8 characterization	PAHs, metals and inorganics	BIG
BH112-SS2	APEC 3-8 characterization	PAHs, metals and inorganics	BIG

Soil Sample ID	Rationale	Requested Analyses	Consultant
BH113-SS1	APEC 3-8 characterization	PAHs, metals and inorganics	BIG
BH113-SS2	APEC 3-8 characterization	PHCs and VOCs	BIG
BH114-SS1	APEC 3-8 characterization	PAHs, metals and inorganics	BIG
BH114-SS2	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH115-SS1	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG
BH115-SS2	APEC 1 & 2 characterization	PAHs, metals and inorganics	BIG

4.13 Elevation Survey

The ground surface geodetic elevations at the borehole locations were surveyed by BIG personnel and referenced to BH6 (103.615 m asl) , previously referenced off the top of MH28 located on Argus Road. A geodetic elevation of 102.35 m asl for top of MH28 was obtained from the Halton Region drawing titled "Watermain and Sanitary Sewer Replacement on Argus Road in the Town of Oakville from Cross Ave. to 180 m North" dated January 2003.

Table 4: Summary of Groundwater Levels and Elevations

Monitoring Well ID	Ground Surface Elevation [1]	Groundwater Level (m bgs)[2]	Groundwater Elevation (AMSL)[2]	Groundwater Sampling Date
BH/MW101	103.04	3.38	99.66	3 Feb 2021
BH/MW102	102.55	3.67	98.88	-
BH/MW103	101.78	2.79	98.99	3 Feb 2021
BH/MW104	100.96	2.45	98.51	3 Feb 2021
BH/MW105	102.38	21.09	81.29	-
BH/MW106	102.83	3.32	99.51	-
BH/MW107	102.40	3.61	98.79	3 Feb 2021
BH/MW108	102.55	3.90	98.65	3 Feb 2021
BH/MW109	102.89	4.20	98.69	-
BH/MW110	101.82	3.08	98.74	-
BH/MW111	101.94	3.37	98.57	3 Feb 2021
BH/MW112	102.78	4.23	98.55	3 Feb 2021
BH/MW113	103.45	4.77	98.68	3 Feb 2021
BH/MW114	103.30	18.87	84.43	-
BH/MW115	101.72	17.91	83.81	3 Feb 2021
MW/BH6	102.74	dry	dry	-
MW/BH3	102.87	1.72	101.15	-
BH/MW4	102.32	2.21	98.52	-
MW105[3]	-	2.28	-	-

[1] Elevation survey was completed using BIG's own Sokkia B40. The survey equipment was calibrated by BIG personnel prior to use.
[2] Groundwater level measured by BIG on February 8, 2021

4.14 Quality Assurance and Quality Control Measures

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

of quality control samples to evaluate sample precision and accuracy, and the implementation of measures to preserve sample integrity.

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

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

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

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

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

Field QA/QC samples were collected during the soil and groundwater sampling. Duplicate samples were collected to evaluate sampling precision.

Two (2) duplicate soil samples were collected for QA/QC purposes as summarized below.

Borehole	Duplicate Sample Identification	Analytical Test Group
BH110-SS2	DUP011002	PHCs, VOCs
BH114-SS2	DUP011402	PAHs, Metals & Inorganics

One (1) duplicate groundwater sample was collected for QA/QC purposes as summarized below.

Monitoring Well	Duplicate Sample Identification	Analytical Test Group
MW112	DUP11201	PHCs, VOCs, PAHs Metals and Inorganics

There were no significant deviations from the SSAP.

5 Review and Evaluation

5.1 Geology

The soil investigation conducted at the Site consisted of the advancement of fifteen (15) boreholes into the surficial soil and the underlying native materials to a maximum depth of 23.4 m bgs. Borehole logs describing geologic details of the soil cores recovered during the Site drilling activities are presented in Appendix C. Boundaries of soil indicated on the log sheets are intended to reflect transition zones for the purpose of environmental assessment and should not be interpreted as exact planes of geological change.

The general stratigraphy at the Site, as revealed in the borehole logs, consists of asphalt with granular base, underlain by fill comprising of clayey silt to sandy silt with inclusions of gravel, rootlets/organics and variable organic staining and topsoil inclusions underlain by fill materials comprised followed by native materials comprised of clayey silt till and shale bedrock with limestone bedding.

A brief description of the soil stratigraphy at the Site, in order of depth, is summarized in the following sections. The interpreted Site geology is shown on the enclosed cross sections (Figures 7A and 8).

5.1.1 Surficial Material

Except 3-boreholes BH/MW112 to BH/MW114, the remaining 12-boreholes were advanced through the existing asphalt pavement, consisting of approximately 75 to 150 mm thick asphalt concrete over 150 to 300 mm thick granular bases.

Borehole BH/MW113 was advanced through an approximately 50 mm thick gravel. Similarly, boreholes BH/MW112 and BH/MW114 were advanced through an existing ground surface cover consisting of approximately 150 mm thick topsoil. Topsoil, in general, consists of high contents of organics and rootlets. It should be noted that topsoil thickness may also vary between and beyond the borehole locations, and thickness could also have changed significantly due to some on-site activities. Therefore, it is recommended that allowance should be made for possible variations when making construction estimates.

5.1.2 Fill Material

Below the ground surface cover, existing fill material, predominantly consisting of clayey silt and sandy silt, were encountered at all borehole locations that extended to depths varying between 0.5 and 1.7 m bgs. Earth fills also contained trace sand, trace gravel, trace rootlets and trace organics.

5.1.3 Native Material

Clayey Silt Till

Below the fill material, a native deposit of glacial clayey silt till was encountered in all boreholes that extended to depths varying between 1.7 and 2.8 m bgs. Clayey silt till deposit also contained trace sand, trace gravel and occasional fragments of Shale.

Due to the nature of till formation, cobbles and boulders should be anticipated within the glacial till deposit.

5.1.4 Shale Bedrock

Below clayey silt till, a highly weathered Georgian Bay Formation grey Shale with interbedded limestone bedrock was encountered in all boreholes. All boreholes were drilled into the Shale bedrock and sampled up to the borehole termination depths.

5.2 Groundwater Elevations and Flow Direction

The monitoring well network advanced at the Site consists of fifteen (15) newly installed monitoring wells and three (3) existing monitoring wells advanced by BIG between 2019 and 2021 and one (1) monitoring well installed by previous consultant Terrapex. The 3 m long screens were installed within shale bedrock aquifer for BIG wells and overburden in the Terrapex installed well.

Based on the topography and the distance of the Site to the Sixteen Mile Creek and Lake Ontario, the inferred groundwater flow direction was considered to be to the south/southwest in the Phase One ESA. The groundwater data collected from across the Site on February 1 and 8, 2021 inferred that the groundwater flow direction is to the south.

5.2.1 Groundwater: Hydraulic Gradients

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

$$i = Ah/As*100$$

Where,

i = horizontal hydraulic gradient;

Ah (m) = groundwater elevation difference; and,

As (m) = separation distance.

The horizontal hydraulic gradient in groundwater, based on groundwater measurements collected on February 09, 2021 was 1.16 % between BH/MW106 and BH/MW112 and 1.64 % between BH/MW101 and BH/MW107 with a geomean of 1.38%.

It is noted that vertical hydraulic gradients were not evaluated for this Site as a second water bearing unit was not identified at the depths investigated at the Site.

5.2.2 Groundwater: Hydraulic Conductivity

Hydraulic conductivity testing was completed in the hydrogeological investigation conducted by BIG (2021). Single Well Response Test (SWRT) analysis was conducted at selected monitoring wells (BH/MW104, 106, 110, 113, 114 and 115). The hydraulic conductivity values for each of the tested wells were calculated from the SWRT data using Aqtesolv Software and the Hvorlsev solution for unconfined conditions. The hydraulic conductivity (K) ranged from 5.34×10^{-5} to 1.58×10^{-8} m/s, with a geometric mean of 3.95×10^{-7} m/s.

5.3 Soil Texture

The native materials encountered, are comprised of clayey silt till with fragments of weathered shale. Soil samples were found to be medium/fine textured, however, as many samples are collected in heterogenous fill near the surface, a more stringent coarse textured standards were applied as part of this Phase Two ESA.

5.4 Soil Field Screening

All soil samples were submitted for chemical analyses based on field observations, location and depth.

5.5 Soil Quality

In accordance with the scope of work, chemical analyses were performed on selected soil samples recovered from the boreholes. The selection of representative “worst case” soil samples was based on

field screening, visual and/or olfactory evidence of impacts, and the presence of potential water bearing zones. Copies of the laboratory Certificates of Analysis for the analyzed soil samples are provided in Appendix F.

5.5.1 PHCs

The soil samples submitted for metals analysis indicated that all parameters were detected below the applicable MECP Table 2 SCS; and, all laboratory RDLs were below the applicable SCS.

Refer to Appendix B for a summary of the soil results analyzed for PHCs.

5.5.2 VOCs

The soil samples submitted for VOCs analysis indicated that all parameters were detected below the applicable MECP Table 2 SCS; and, all laboratory RDLs were below the applicable SCS.

Refer to Appendix B for a summary of the soil results analyzed for VOCs.

5.5.3 PAHs

The soil samples submitted for PAHs analysis indicated that all parameters were detected below the applicable MECP Table 2 SCS; and, all laboratory RDLs were below the applicable SCS.

Refer to Appendix B for a summary of the soil results analyzed for PAHs.

5.5.4 Metals

The soil samples submitted for metals analysis indicated that select parameters were detected at concentrations above the MECP Table 3 SCS:

Parameter	MECP (2011a) Table 2 SCS	Number of Soil Samples Submitted	Number of Soil Samples Exceeding the applicable SCS	Maximum concentration detected
Metals				
Copper	140 µg/g	17	2	493 µg/g

The remaining parameters were all detected below the applicable MECP Table 3 SCS and all laboratory RDLs were below the applicable SCS.

Refer to Appendix B for a summary of the soil results analyzed for metals.

5.5.5 Inorganics

Electrical conductivity (EC) and sodium adsorption ratio (SAR) were detected in soil in exceedance of the applicable MECP Table 2 SCS in five (5) samples. However, under the newly amended O.Reg.153/04 (O.Reg.407/19), if a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under the conditions of snow or ice or both (i.e., application of de-icing salts), its related parameters are not deemed to be in exceedance of the MECP Table 2 SCS. As de-icing salts were used at the Site EC and SAR are not considered as contaminants of concern.

The remaining parameters were all detected below the applicable MECP Table 2 SCS and all laboratory RDLs were below the applicable SCS.

Refer to Appendix B for a summary of the soil results analyzed for inorganics.

5.5.6 Chemical Transformation and Soil Contaminant Sources

Few parameters were identified in soil at concentrations in exceedance of the applicable MECP Table 2 SCS. However, given the nature of the compounds it is not expected that any chemical transformation (i.e.,

presence of parent compounds and daughter products) has occurred on the property. Further assessment would need to be conducted to assess whether any natural attenuation processes have occurred.

5.5.7 Evidence of Non-Aqueous Phase Liquid

Inspection of the soil cores retrieved from the boreholes did not indicate the presence of non-aqueous phase liquid (NAPL), staining or sheen.

5.6 Groundwater Quality

Representative groundwater samples were collected from nine (9) of the newly installed monitoring wells to assess groundwater quality at the Site. Evidence of free product (i.e., visible film or sheen), and odour was not observed during well purging (noted in Section 5.6.6).

Analytical results summary tables are provided in Appendix B and copies of the laboratory Certificates of Analysis for the analyzed groundwater samples are provided in Appendix F.

5.6.1 PHCs

Groundwater samples submitted for PHCs analysis indicated that all parameters were detected below the applicable MECP Table 2 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Appendix B for a summary of the groundwater results analyzed for PHCs.

5.6.2 BTEX

Groundwater samples submitted for BTEX analysis indicated that all parameters were detected below the applicable MECP Table 2 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Appendix B for a summary of the groundwater results analyzed for BTEX.

5.6.3 VOCs

Groundwater samples submitted for VOCs analysis indicated that all parameters were detected below the applicable MECP Table 2 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Appendix B for a summary of the groundwater results analyzed for VOCs.

5.6.4 PAHs

Groundwater samples submitted for PAHs analysis indicated that all parameters were detected below the applicable MECP Table 2 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Appendix B for a summary of the groundwater results analyzed for PAHs.

5.6.5 Metals

Groundwater samples submitted for metals analysis indicated that all parameters were detected below the applicable MECP Table 2 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Appendix B for a summary of the groundwater results analyzed for metals.

5.6.6 Inorganics

Groundwater samples submitted for inorganics analysis indicated that chloride was detected in groundwater at one (1) monitoring well in exceedance of the applicable MECP Table 2 SCS. However, under the newly amended O.Reg.153/04 (O.Reg.407/19), if a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under the conditions of snow or ice or both (i.e., application of de-icing salts), its related parameters are not deemed to be in exceedance of the MECP Table 2 SCS. As de-icing salts were used at the Site chloride is not considered as a contaminant of concern in groundwater at

the Site.

The remaining parameters were all detected below the applicable MECP Table 2 SCS and all laboratory RDLs were below the applicable SCS.

Refer to Appendix B for a summary of the groundwater results analyzed for inorganics.

5.6.7 Chemical Transformation and Contaminant Sources

The inorganic chemical constituent detected in groundwater comprised of chloride. Given the nature of the compound, it is not expected that any chemical transformation has occurred on the property. However, further assessment would need to be completed to assess whether any natural attenuation processes have occurred.

5.6.8 Evidence of Non-Aqueous Phase Liquid

Inspection of the purged groundwater retrieved from the monitoring wells did not indicate the presence of NAPL, staining, sheen, or odour in groundwater.

5.7 Sediment Quality

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

5.8 Quality Assurance and Quality Control Measures

QA/QC measures were taken during the field activities to meet the objectives of the sampling and QA plan to collect unbiased and representative samples to characterize existing conditions in the fill/upper overburden materials and water table aquifer unit at the Site. QA/QC measures included:

a) The collection of soil and groundwater samples following standard operating procedures;
b) The implementation of decontamination procedures to minimize the potential for sample cross contamination;
c) The collection of recommended analytical test group specific volumes into pre-cleaned laboratory supplied containers provided with necessary preservatives as required;
d) Sample preservation in insulated coolers pre-chilled with ice and meeting holding time requirements;
e) Sample documentation including Chain of Custody protocols; and
f) The collection of QC samples.

Review of field activity documentation indicated that recommended sample volumes were collected from soil and groundwater for each analytical test group into appropriate containers and preserved with proper chemical reagents in accordance with the protocols set out in the "Protocol for Analytical Methods used in the Assessment of Properties under Part XV.1 of the ***Environmental Protection Act',*** dated March 9, 2004, amended as of July 1,2011. Samples were preserved at the required temperatures in pre-chilled insulated coolers and met applicable holding time requirements, when relinquished to the receiving laboratory.

Field QA/QC samples were collected during the soil and groundwater sampling. Duplicate samples were collected to evaluate sampling precision.

Two (2) duplicate soil samples were collected for QA/QC purposes as summarized below.

Borehole	Duplicate Sample Identification	Analytical Test Group
BH110-SS2	DUP011002	PHCs, VOCs
BH114-SS2	DUP011402	PAHs, Metals & Inorganics

One (1) duplicate groundwater sample were collected for QA/QC purposes as summarized below.

Borehole	Duplicate Sample Identification	Analytical Test Group
MW112	DUP11201	PHCs, VOCs, PAHs Metals and Inorganics

The field duplicate sample results were quantitatively evaluated by calculating the relative percent difference (RPD). Assessment of the duplicate soil samples, where quantifiable, showed that the results met analytical test group specific acceptance criteria. The overall assessment indicates that the soil samples were collected within an acceptable level of precision, and the data is acceptable quality for meeting the objectives of the Phase Two ESA.

The subcontract laboratory used during this investigation, AGAT. AGAT is accredited by the Standards Council of Canada/Canadian Association of Environmental Analytical Laboratories (Accredited Laboratory No. A3200) in accordance with ISO/IEC 17025:2005 - "General Requirements for the Competence of Testing and Calibration Laboratories".

Certificates of Analysis were received from AGAT reporting the results of all the chemical analyses performed on the submitted soil and groundwater samples. Copies of the AGAT Certificates of Analysis are provided in Appendix F. Review of the Certificates of Analysis prepared by AGAT indicates that they were in compliance with the requirements set out under subsection 47(3) of O.Reg.153/04.

The analytical program conducted by AGAT included analytical test group specific QA/QC measures to evaluate the accuracy and precision of the analytical results and the efficiency of analyte recovery during solute extraction procedures. The laboratory QA/QC program consisted of the preparation and analysis of laboratory duplicate samples to assess precision and sample homogeneity, method blanks to assess analytical bias, spiked blanks and QC standards to evaluate analyte recovery, matrix spikes to evaluate matrix interferences and surrogate compound recoveries (VOCs only) to evaluate extraction efficiency. The laboratory QA/QC results are presented in the Quality Assurance Report provided in the Certificate of Analysis prepared by AGAT. The QA/QC results are reported as percent recoveries for matrix spikes, spike blanks and QC standards, RPDs for laboratory duplicates and analyte concentrations for method blanks.

The AGAT QA/QC results were assessed against test group control limits in the case of spiked blanks, matrix spikes and surrogate recoveries and alert criteria in the case of method blanks and laboratory duplicates. Review of the laboratory QA/QC results reported by AGAT indicated that they were within acceptable control limits or below applicable alert criteria for the sampled media and analytical test groups. Based on the assessment of the QA/QC, the analytical results reported by AGAT are of acceptable quality and data qualifications are not required.

5.9 Phase Two Conceptual Site Model

This section presents a Conceptual Site Model (CSM) providing a narrative, graphical and tabulated description integrating information related to the Site geologic and hydrogeologic conditions, areas of potential environmental concern/potential contaminating activities, the presence and distribution of potential contaminants of concern, contaminant fate and transport, and potential exposure pathways.

5.9.1 Introduction

The Site is located to the south of the Queen Elizabeth Way, north of Cross Avenue and east of Argus Road in Oakville, Ontario, as shown on Figure 1. The Site measures 8,779 m² in size. The Site is currently occupied by three (3) restaurants; McDonalds, Swiss Chalet and Harveys with associated asphalt car parking with an undeveloped area at 571 Argus Road.

The Site is bordered by commercial properties to the north east and north west, Argus Road to the south west and Cross Ave to the south east. The surrounding properties are shown on Figure 1.

Table 1: Site Information

Site Details	
Municipal Addresses	217, 227 Cross Avenue and 571 Argus Road, Oakville, Ontario
Current Owner	Distrikt Capital
Owner Address	1-90 Wingold Avenue, Toronto, Ontario, M6B 1P5
Owner Contact Person	Clarence Zichen Qian
Legal Description	• 217 Cross Avenue - Part Lot 13, 14, concession 3 Trafalgar, South of Dundas Street, Town of Oakville. • 227 Cross Avenue - Part Lot 13, Concession 3 Trafalgar, South of Dundas Street, Town of Oakville. • 517 Argus Road - Part Lots 13 & 14, Concession 3 Trafalgar South of Dundas Street, Town of Oakville
Property Identification Numbers (PINs)	217 Cross Avenue - 24816-0044 (LT) 227 Cross Avenue - 24816-0043 (LT) 571 Argus Road - 24816-0114 (LT)
Property Size	8,779 m²
Approximate Universal Transverse Mercator (UTM) coordinates	Zone: 17 Easting: 606480 Northing: 4812428 (1m, NAD83, QGIS)

5.9.2 Potentially Contaminating Activities and Areas of Potential Environmental Concern

A Phase One ESA, in accordance with O. Reg. 153/04, as amended, has been conducted by BIG for the Site. The surrounding land use plan and PCAs identified On-Site and in the Phase One ESA Study Area are shown on Figure 2. A list of all PCA's identified at the Site and within the Phase One ESA Study Area are presented below:

Table 2: Potentially Contaminating Activities in the Phase One Study Area

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
1.	217 - 227 Cross Avenue and 571 Argus Road	De-icing salt usage (PCA#48 – Salt Manufacturing, Processing and Bulk Storage)	On-Site	Yes	On-Site
2.		Unknown Fill Material (PCA#30 – Importation of Fill Material of Unknown Quality)	On-Site	Yes	On-Site
3.	568 Argus Road	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (21 m west)	Yes	Located trans-gradient Adjacent
4.	570 Argus Road	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (21 m west)	Yes	Located trans-gradient Adjacent

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
5.		PCA#10 commercial auto body shops			
6.		PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks			
7.	572 Argus Road	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (21 m west)	Yes	Located trans-gradient Adjacent
8.	187 Cross Avenue	Former dry cleaner (PCA#37 – Operation of Dry Cleaning Equipment (Where Chemicals are Used))	Off-Site (29 m south west)	No	Inferred down-gradient
9.	233 Cross Avenue	Former dry cleaner (PCA#37 – Operation of Dry Cleaning Equipment (Where Chemicals are Used))	Off-Site (32 m east)	No	Located trans-gradient
10.		PCA#55 Transformer Manufacturing and Processing			
11.	185 Cross Avenue	Tanning (PCA#53 Tanning)	Off-Site (67 m south, south west)	No	Inferred down-gradient
12.	570 Trafalgar Road	(PCA#28 Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (75 m north, north east)	No	Inferred trans-gradient
13.	546 Cross Avenue	Former UST (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (80 m east)	No	Located trans-gradient
14.	218 Cross Avenue	Former service station (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (90 m south)	No	Inferred down-gradient
15.	562 Trafalgar Road	PCA#54 textile manufacturing and processing	Off-Site (124 m east)	No	Inferred trans-gradient
16.	165 Cross Avenue	PCA# 10 Commercial Autobody Shops	Off-Site (141 m south west)	No	Inferred down-gradient

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
17.	580 Argus Road	Former Paint Manufacturing (PCA#39 Paints Manufacturing, Processing and Bulk Storage)	Off-Site (150 m west)	Yes	Located trans-gradient Adjacent
18.	547 Trafalgar Road	(PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (159 m east)	No	Located trans-gradient
19.		(PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
20.	200 Cross Avenue	Former USTs (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (174 m south east)	No	Located down-gradient
21.	125 Cross Avenue	Former Leather Manufacturing (PCA#53 Tannery)	Off-Site (190 m west)	No	Located trans-gradient
22.		Former Tire and Rubber Manufacturing (PCA#47 Rubber Manufacturing and Processing)			
23.		Former Auto Body Shop (PCA#10 Commercial Auto Body Shops)			
24.		Former Dry Cleaner (PCA#37 Operation of Dry-Cleaning Equipment)			
25.		(PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
26.	148 Cross Avenue	(PCA#32 Iron and Steel Manufacturing and Processing)	Off-Site (206 m south, south west)	No	Located down-gradient
27.		Former USTs (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
28.	489 Trafalgar Road	Former service station (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (215 m south)	No	Located down-gradient

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
29.	2 Dundas Street North	(PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (215 m south)	No	Inferred down-gradient
30.	485 Trafalgar Road	Lumber Yard (PCA#59 wood treating, and preservative facility and bulk storage of treated and preserved wood products)	Off-Site (219 m east southeast)	No	Inferred down-gradient
31.		(PCA#39 Paints Manufacturing)			
32.		(PCA#43 Plastics (including Fibreglass) Manufacturing and Processing)			
33.		PCA#53 Tannery			
34.	166 South Service Road	Coal Yard (PCA#9 Coal Gasification)	Off-Site (226 m north west)	No	Inferred down-gradient
35.	590 Dundas North	Wood Yard (PCA#59 wood treating and preservative facility and bulk storage of treated and preserved wood products)	Off-Site (230 m south)	No	Inferred down-gradient
36.	151 Dundas North	(PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (230 m south)	No	Located down-gradient
37.	462 Trafalgar Road	(PCA #40 Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications)	Off-Site (230 m southeast)	No	Located down-gradient
38.		(PCA#28 Gasoline and Associated Products Storage in Fixed Tanks)			
39.	312 Davis Road	(PCA#28 Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (232 m northeast)	No	Inferred trans-gradient

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
40.	457 Reynolds Street	(PCA #40 Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications)	Off-Site (238 m east)	No	Inferred trans-gradient
41.		Former dry cleaner (PCA#37 operation of dry-cleaning equipment)			
42.	152 Cross Avenue	Former Autobody shop (PCA#10 Commercial Auto Body Shops)	Off-Site (239 m west)	No	Located trans-gradient
43.	142 Cross Avenue	Tire and Rubber (PCA#47 Rubber Manufacturing and Processing)	Off-Site (245 m west)	No	Inferred trans-gradient
44.	541 Dundas North	Tire and Rubber (PCA#47 Rubber Manufacturing and Processing)	Off-Site (250 m south)	No	Located down-gradient

1) *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.*

The identification of the PCAs both on-Site and off-Site within the Phase One study area are shown on Figure 3.

Based on the rationale provided, it is the opinion of the Qualified Person (QP) that seven (7) PCAs are considered APECs at the Site. Further discussion is provided below.

5.9.3 Areas of Potential Environmental Concern

Based on the evaluation of the PCAs located on- and off-Site, seven (7) APECs were identified, as presented below:

Table 2: Areas of Potential Environmental Concern (APECs)

Area of Potential Environmental Concern (APEC)[1]	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)[2]	Location of PCA (On-Site or Off-Site)[2]	Potential Contaminants of Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1: De-icing salt usage	Entire Site, excluding building footprints	PCA#48 – Salt Manufacturing, Processing and Bulk Storage	On-Site	Electrical Conductivity, SAR, Sodium and Chloride	Soil and Groundwater

Area of Potential Environmental Concern (APEC)[1]	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)[2]	Location of PCA (On-Site or Off-Site)[2]	Potential Contaminants of Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 2: Unknown fill materials	Entire Site, excluding building footprints	PCA#30 – Importation of Fill Material of Unknown Quality	On-Site	PAHs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-, low or high pH	Soil and Groundwater
APEC 3: Former Metal Fabrication	Western portion	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (west adjacent)	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-, low or high pH	Groundwater
APEC 4: Former Metal Fabrication	Western portion	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (west adjacent)	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-, low or high pH	Groundwater
APEC 5: Commercial Auto Body Shop	Western portion	PCA#10 commercial auto body shops	Off-Site (west adjacent)	VOCs, PHCs, BTEX	Groundwater
APEC 6: Automotive shop	Western portion	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks	Off-Site (west adjacent)	PHCs and BTEX	Groundwater
APEC 7: Former metal fabrication	Western portion	Former Metal Fabrication (PCA#34 metal fabrication)	Off-Site (west adjacent)	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-, low or high pH	Groundwater

1) *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*
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.*

PHCs = petroleum hydrocarbons; BTEX = benzene, toluene, ethylbenzene and toluene; VOCs = volatile organic compounds; PAHs = polycyclic aromatic hydrocarbons; As = arsenic, Sb = antimony, Se = selenium; Cr (VI) = chromium hexavalent; Hg = mercury; B-HWS = boron hot water soluble; CN- = cyanide; EC = electrical conductivity; SAR = sodium adsorption ratio

Refer to Figures 4 and 5 for the Site plan illustrating the borehole/monitoring well locations and APECs.

5.9.4 Underground Utilities

The Site utilities and services were identified at the Site based on the relevant utility infrastructure observed during the Site reconnaissance and are summarized in the table below. It is noted that the precise underground location of the utilities cannot be determined without professional locate services.

Utility	Source	Location	Site Entry
Storm Sewer	Town of Oakville	Entrance of Site	A catch basin is located at the entrance of Site as well throughout the parking lots.
Sanitary Sewer	Town of Oakville	Cross Avenue	A manhole in front of Site on Cross Avenue

Utility	Source	Location	Site Entry
Natural Gas	Enbridge Gas	South	Given that the Site is located in a mixed residential and commercial area, the natural gas lines are anticipated to run along Cross Avenue and Argus Road.
Electricity	Oakville Hydro	South	Overhead hydro lines were observed along Cross Avenue and Argus Road.

5.9.5 Physical Site Description

The Phase Two CSM provides a narrative and graphical interpretation of the Site surface features, near surface geologic and hydrogeologic conditions, potential contaminants of concern, contaminant fate and transport mechanisms and relevant receptors and exposure pathways. These components are discussed in the following sections.

Surface Features

The Site is currently occupied by three (3) restaurants; McDonalds, Swiss Chalet and Harveys with associated asphalt car parking with an undeveloped area at 571 Argus Road.

Geologic Setting

Information on the overburden and bedrock geology of the general Site area was obtained during the Phase One ESA. Based on the review, the following was summarized:

The physiography of the site is within the Iroquois Plains characterized as the Shale Plains. The surficial geology of the Site is described as a Paleozoic Bedrock. Bedrock in the general area of the Site consists of shale, limestone, dolostone and siltstone of the Georgian Bay formation; Blue Mountain formation; Billings formation, Collingwood Member and Eastview member.

Based on the review of the OBM and Toporama map, the Site is at an elevation of approximately 102 metres above sea level (m asl), generally at the same elevation to surrounding properties.

Based on the review of available resources from ERIS, Ontario Ministry of Natural Resources (MNR), Natural Heritage Information Centre (NHIC) database and the City of Toronto environmentally significant areas map (City of Toronto), no areas of natural significance were identified at the Site or within the Phase One study area.

The general stratigraphy at the Site, as observed in the boreholes, consisted of Asphalt over a granular base, fill material comprised of clayey silt underlain by native material characterized by clayey silt till with shale fragments varying in thickness and depths. As previously indicated, more than two-thirds (2/3) of the Site consisted of soil equal to or greater than 2 m in depth. Bedrock was encountered at the Site in all boreholes at depths of between 1.7- 2.8 m bgs.

A brief description of the soil stratigraphy at the Site, in order of depth, is summarized in the following sections. The interpreted Site geology is shown on the enclosed cross sections.

Surface Material

Except 3-boreholes BH/MW112 to BH/MW114, remaining all 12-boreholes were advanced through the existing asphalt pavement, consisting of approximately 75 to 150 mm thick asphalt concrete over 150 to 300 mm thick granular bases.

Borehole BH/MW113 was advanced through an approximately 50 mm thick gravel. Similarly, boreholes BH/MW112 and BH/MW114 were advanced through an existing ground surface cover consisting of

approximately 150 mm thick topsoil. Topsoil, in general, consists of high contents of organics and rootlets. It should be noted that topsoil thickness may also vary between and beyond the borehole locations, and thickness could also have changed significantly due to some on-site activities. Therefore, it is recommended that allowance should be made for possible variations when making construction estimates.

Fill

Below the ground surface cover, existing fill material, predominantly consisting of clayey silt and sandy silt, were encountered at all borehole locations that extended to depths varying between 0.5 and 1.7 m bgs. Fill material also contained trace sand, trace gravel, trace rootlets and trace organics.

Clayey Silt Till

Below the fill material, a native deposit of glacial clayey silt till was encountered in all boreholes that extended to depths varying between 1.7 and 2.8 m bgs. Clayey silt till deposit contained trace sand, trace gravel and occasional fragments of Shale.

Due to the nature of till formation, cobbles and boulders should be anticipated within the glacial till deposit.

Shale Bedrock

Below clayey silt till, a highly weathered Georgian Bay Formation grey Shale with interbedded limestone bedrock was encountered in all boreholes. All boreholes were drilled into the Shale bedrock and sampled up to the borehole termination depths.

Refer to the geological cross sections in Figures 7A and 8 for an overview of the Site stratigraphy.

Hydrogeologic Setting

One (1) hydrostratigraphic unit was encountered at the Site which acts as an aquifer.

The on-Site monitoring well network consists of a total of eighteen (18) monitoring wells advanced by BIG (between 2019-2021) screened within the bedrock and one (1) monitoring wells installed by previous consultant screened within the overburden.

Groundwater depths within the groundwater table across the Site ranged between approximately 1.72 m and 4.77 m bgs in shallow boreholes, and 17.91 - 21.09 m bgs in deeper boreholes based on measurements recorded on February 8, 2021.

Based on the static water levels observed, the interpreted predominant groundwater flow was towards the south. The interpreted groundwater flow direction is presented on Figure 6.

Hydraulic conductivity testing was completed in the hydrogeological investigation conducted by BIG (2021). Single Well Response Test (SWRT) analysis was conducted at selected monitoring wells (BH/MW104, 106, 110, 113, 114 and 115). The hydraulic conductivity values for each of the tested wells were calculated from the SWRT data using Aqtesolv Software and the Hvorlsev solution for unconfined conditions. The hydraulic conductivity (K) ranged from 5.34×10^{-5} to 1.58×10^{-8} m/s, with a geometric mean of 3.95×10^{-7} m/s.

The horizontal hydraulic gradient in groundwater, based on groundwater measurements collected on February 09, 2021 was 1.16 % between BH/MW106 and BH/MW112 and 1.64 % between BH/MW101 and BH/MW107 with a geomean of 1.38%.

It is noted that vertical hydraulic gradients were not evaluated for this Site as a second water bearing unit was not identified at the depths investigated at the Site.

5.9.6 Site Sensitivity

The Site Sensitivity classification with respect to the conditions set out under Section 41 and 43.1 of O.Reg.153/04 were evaluated to determine if the Site is sensitive, as presented in the table below:

Table 4: Site Sensitivity

Sensitivity	Classification	Does Sensitivity Apply to Site?
Section 41 applies if	(i) property is within an area of natural significance	No
	(ii) property includes or is adjacent to an area of natural significance or part of such an area	No
	(iii) property includes land that is within 30 m of an area of natural significance or part of such an area	No
	(iv) soil at property has a pH value for surface soil less than 5 or greater than 9	No
	(v) soil at property has a pH value for sub-surface soil less than 5 or greater than 11	No
	(vi) a qualified person is of the opinion that, given the characteristics of the property and the certifications the qualified person would be required to make in a record of site condition in relation to the property as specified in Schedule A, it is appropriate to apply this section to the property	No
Section 43.1 applies if	(i) property is a shallow soil property	No
	(ii) property includes all or part of a water body or is adjacent to a water body or includes land that is within 30 m of a water body	No

A total of seventeen (17) plus one (1) duplicate soil samples were collected and submitted from across the Site for pH analysis. All samples were within the SCS Table 2 range with average pH from the soil samples being 7.66 which is within the MECP acceptable pH range for surficial soil of 5 to 9.

5.9.7 Remediation

No remediation has occurred on-Site.

5.9.8 Soil Importation

Fill can be used to re-grade a property and to backfill excavations. Based on the historical information reported in the Phase One ESA, fill material may have been imported to the Site to regrade the Site for car park.

5.9.9 Land Use

The Site is currently occupied by three (3) restaurants; McDonalds, Swiss Chalet and Harveys with associated asphalt car parking with an undeveloped area at 571 Argus Road. The proposed redevelopment of the Site will include two (2) residential condominium towers with six (6) levels of underground parking. The building footprint of the future development will extend to the property boundaries.

5.9.10 Contaminants of Concern

The MECP (2011a) Table 2: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Land Use and coarse textured soils were considered applicable for determining contaminants of concern (COCs), based on the reasons presented below:

Table 5: Site Condition Standards

Descriptor	Site-Specific Condition
Section 41 Site Sensitivity	Not applicable o The soil at the Site has pH values between 5 and 9 for surficial soil; and, between 5 and 11 for subsurface soil. o The Site is not located within, or adjacent to, an area of natural significance, or part of such an area; and, the Site does not include land that is within 30 m of an area of natural significance, or part of such an area.
Section 43.1 Site Sensitivity	Not applicable o The Site is not considered a shallow soil property, based on the recovered soil cores, which indicated that more than two-thirds of the Site has an overburden thickness in excess of 2 m; and, o The Site is not located within 30 m of a surface water body; The nearest water body is a tributary to Morrison Creek which is located approximately 335 m east and Lake Ontario is located approximately 2.0 km to the southeast
Ground Water	Potable o The Site is supplied by the Halton Region municipal water system. o The RSC property is not located within an area designated in a municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater. o The property, and all other properties located, in whole or in part, within 250 metres of the boundaries of the property, are supplied by a municipal drinking water system, as defined in the *Safe Drinking Water Act, 2002.*
Land Use	Residential/Parkland/Institutional o The future use of the Site will be residential land use.
Soil Texture	Coarse o The predominant texture of soils at the Site is considered to be medium/fine textured, however due to heterogenous fill at surface and the depth to bedrock, a more stringent coarse textured classification was adopted.

The COCs identified in soil prior to remediation are presented in the tables below. No groundwater COCs were identified at the Site.

Table 6: Contaminants of Concern in Soil

Parameter Analyzed	Maximum concentration	Site Condition Standard [(1)]	Maximum Concentration Above Applicable SCS
Copper	493	140	Yes

1) MECP (2011a) Table 2 Site Condition Standards in Residential/Parkland/Institutional property use and coarse textured soil.

5.9.11 Soil Impacts Prior to Remediation

Information regarding the reasons for discharge, distribution and delineation of the impacts detected in soil are summarized in the below tables.

Table 7: Reasons for Discharge of Soil Impacts

Parameter Group and Media	Contaminants associated with each parameter group	Reason for Discharge
Metal parameters in soil	Copper	Likely associated with the importation of fill material of unknown quality at the Site

Table 8: Distribution of Soil Impacts

Parameter group and media	Contaminants associated with each group	Distribution
Metal parameters in soil	Copper	Northern portion of the Site

Table 9: Delineation of Soil Impacts

Parameter group and media	Contaminant associated with each group	Horizontal Delineation	Associated Figures	Vertical Delineation	Associated Figures
Metals in soil	Copper	North east and north west site boundary. BH/MW102, BH/MW105 and BH/MW109 in the south	7B	Not Completed	7B

5.9.12 Contaminant Fate and Transport

Soil Media

The soil COCs that were present at the Site prior to remediation was copper.

Based on the former activities on-Site, the impacts are likely associated with importation of fill material of unknown quality for regrading.

A variety of physical, chemical and biochemical mechanisms affect the fate and transport of the potential COCs in soil, the contribution of which is dependent on the soil conditions and the chemical/physical properties of the COCs. Relevant fate and transport mechanisms are natural attenuation mechanisms, including advection mixing, mechanical dispersion/molecular diffusion, phase partitions (i.e., sorption and volatilization), and possibly abiotic or biotic chemical reactions, which effectively reduce COC concentrations.

As a result of the various natural attenuation mechanisms in the soil environment, the concentrations of COCs in soil are expected to reduce at the Site in the long-term.

There are no known preferential pathways for contaminants present in soil media.

Groundwater Media

No COCs were present in the groundwater at the Site.

5.9.13 Preferential Pathways

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

Buildings or underground utilities were identified at the Site however preferential pathways may have been present in the past when there were utilities and buildings present at the Site.

The soil at the Site is localised in the north and no groundwater COCs were identified, as such preferential pathways are not considered further.

5.9.14 Climatic Conditions

It is noted that climatic or meteorological conditions may have influenced the distribution and migration of COCs at the Site. Seasonal fluctuations in groundwater due to cyclical increases and decreases in precipitation can affect groundwater recharge. Groundwater levels may be elevated in the spring and fall due to snow melt and/or increases in precipitation; and, groundwater levels may be lowered in the winter and summer due to snow storage and/or increased evaporation. Such fluctuations can increase the vertical distribution of COCs in the capillary zone, as well as alter the direction of groundwater flow paths based on changes in infiltration rates. However, based on the conditions observed at the Site, it is not anticipated that the climatic or meteorological changes will have resulted in significant alterations in the distribution of contaminants previously present at the Site. As no COCs remain at the Site following remediation climatic conditions are not considered further.

5.9.15 Soil Vapour Migration

No PHCs or VOCs were present at the Site. Soil vapour intrusion is unlikely to have occurred on the Site due to site history. As no volatile COCs were detected at the Site in soil and no COCs are present in groundwater, soil vapour migration is no longer possible at the Site and is not considered further.

5.9.16 Receptors and Exposure Pathways

Human Health Receptors and Exposure Pathways

As COCs remain in soil at the Site and no COCs were identified in groundwater there are a few complete human receptor exposure pathways at the Site.

Scenario	Receptor	Exposure Pathways
Property Residents	Adult (including pregnant female), Teen, Child, Toddler, Infant	Soil Inhalation Soil Skin Contact Soil Ingestion
Workers – Long Term (indoor)	Adult (including pregnant female)	none
Workers – Short Term (outdoor)	Adult (including pregnant female)	Soil Inhalation Soil Skin Contact Soil Ingestion
Property Visitor - Recreational	Adult (including pregnant female), Teen, Child, Toddler, Infant	Soil Inhalation Soil Skin Contact Soil Ingestion
Property Visitor - Trespassers	Adult (including pregnant female), Teen, Child, Toddler, Infant	Soil Inhalation Soil Skin Contact Soil Ingestion
Workers – Construction/Remediation	Adult (including pregnant female)	Soil Inhalation Soil Skin Contact Soil Ingestion

The human health conceptual on-Site model is included as Appendix D.

Ecological Receptors and Exposure Pathways

As COCs are limited to the north of the Site and no COCs were identified in groundwater there are no complete ecological receptor exposure pathways at the Site.

Primary Source	Secondary Source	Receptor	Exposure Pathway
Impacted soil	Impacted soil/air	Vegetation	Root Uptake of Soil Stem and Foliar Uptake
		Soil invertebrates	Soil Inhalation Soil Dermal Contact Soil Ingestion
		Animals	Soil Inhalation Soil Dermal Contact Soil Ingestion
	Impacted plant/animal tissue	Soil invertebrates	Soil Inhalation Soil Dermal Contact Soil Ingestion
		Terrestrial birds and mammals	Soil Inhalation Soil Dermal Contact Soil Ingestion

The ecological health conceptual on-Site model is included as Appendix D.

6 Summary of Findings

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

1. The general stratigraphy at the Site, as revealed in the borehole logs, consists of a surficial material consisting of asphalt, granular or topsoil underlain by fill materials comprised of clayey silt and sandy silt, followed by native materials comprised of clayey silt till with trace gravels and shale fragments. Below native soil was a highly weathered shale bedrock with interbedded limestone which was encountered in all boreholes.
2. The groundwater depths across the entire Site ranged between approximately 1.72 m and 4.77 m below ground surface (bgs) in shallow wells and 17.91 to 21.09 m bgs in the deep wells on February 08, 2021.
3. The soil analytical results indicated that select parameters were detected at concentrations above the applicable MECP (2011) Table 2 Site Condition Standards in a Potable Groundwater Condition for Residential/Parkland/Institutional land use and coarse textured soils were:

Parameter	MECP (2011a) Table 2 SCS	Number of Soil Samples Submitted	Number of Soil Samples Exceeding the applicable SCS	Maximum concentration detected
Metals				
Copper	140 µg/g	17	2	493 µg/g

4. The groundwater analytical results indicated that all groundwater samples submitted for PHCs, BTEX, VOCs, PAHs, metals and inorganics analyses were either non-detected or detected below the applicable MECP (2011) Table 2 SCS; and all laboratory RDLs were below the applicable SCS.

7 Conclusions and Recommendations

The soil COC present at the Site comprised of copper at concentrations in exceedance of the MECP Table 2 Site Condition Standards for coarse textured soil in BH101 and BH106. Based on the former activities on-Site, the impacts are likely associated with the importation of fill material of unknown quality.

In order to proceed with the Record of Site Condition (RSC), the following is recommended:

1. Vertically and laterally delineate the copper exceedances identified in BH101 and BH106.
2. Excavate the impacted soil and dispose of off Site at a registered landfill facility.
3. Conduct confirmatory soil sampling.
4. Prepare a report documenting remedial activities.
5. Update Phase Two ESA.
6. File RSC

8 General Limitations

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

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Yours truly,

B.I.G. Consulting Inc.

Rebecca Morrison, M.Env.Sc
Project Manager

Darko Strajin, P.Eng., QP_{ESA}
Managing Partner

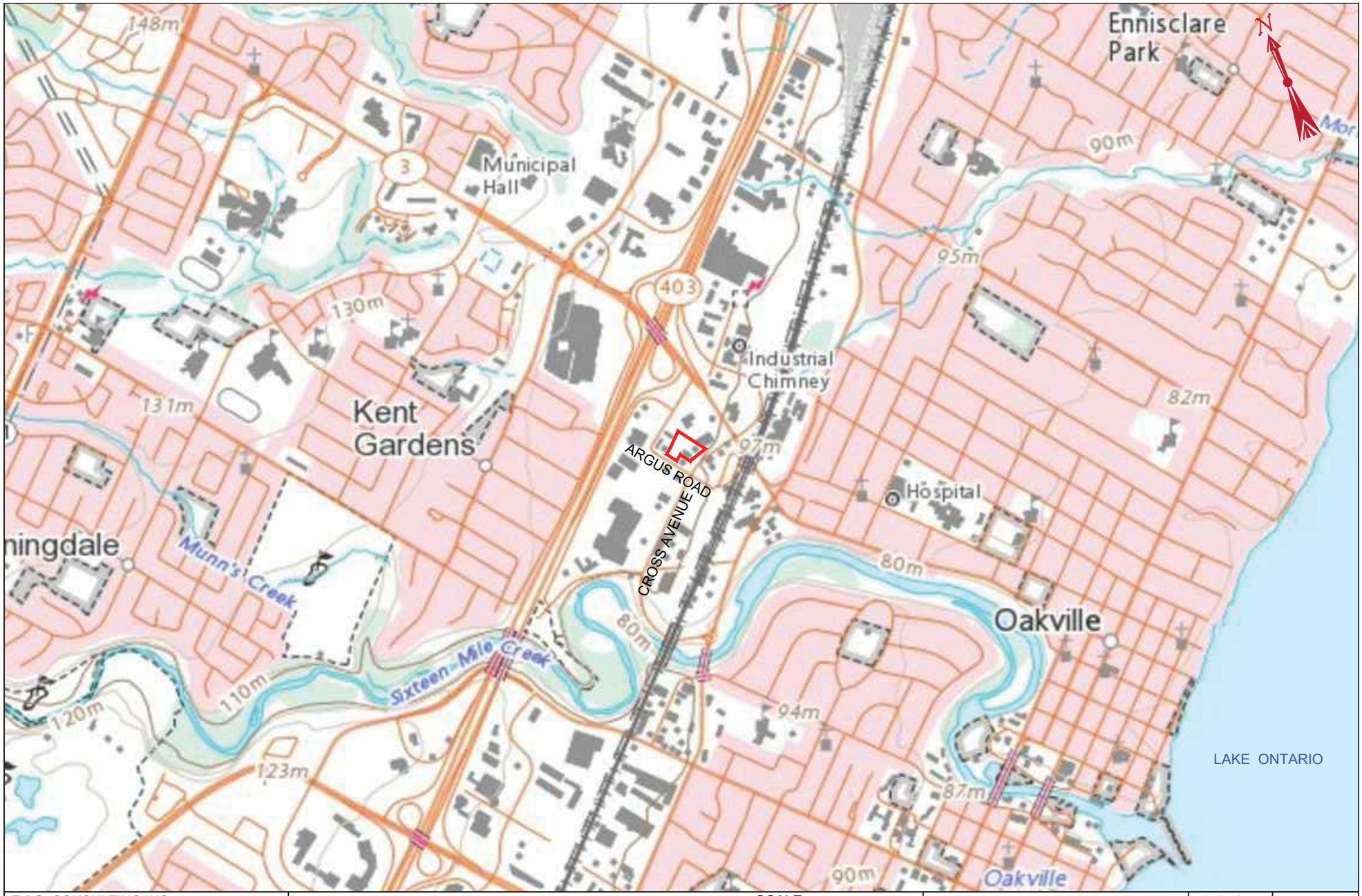
9 References

1. MECP (2011a) "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*";
2. MECP (2011b) Protocol for Analytical Methods Used in the Assessment of Properties under Prt XV.1 of the *Environmental Protection Act*. PIBS 4696e01
3. MECP (2018); Well Records Map. Retrieved from https://www.ontario.ca/environment-and-energy/map-well-records
4. City of Toronto (2017); Environmentally Significant Areas Interactive Map. Retrieved from http://map.toronto.ca/maps/map.jsp?app=ESA
5. NHIC (2017); Make a Natural Heritage Map. Retrieved from http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US
6. Toporama. Retrieved from http://www.atlas.gc.ca/toporama/en/index.html

The following is a list of the Site investigations reviewed in support of this report:

1. Terrapex (2018) Phase I and Phase II Environmental Site Assessment, 217 Cross Avenue and 571 Argus Road, Oakville, Ontario. Terrapex Environmental Ltd. September 28, 2018.
2. BIG (2019) Preliminary Geotechnical Investigation, 217 Cross Avenue and 571 Argus Road, Oakville Ontario. B.I.G Consulting Inc., December 3, 2019.
3. BIG (2020) Draft Phase One Environmental Site Assessment, 227 Cross Avenue Road, Oakville Ontario. B.I.G Consulting Inc., December 22, 2020.

Figures



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LEGEND

SITE BOUNDARY

SCALE

250m 0m 750m

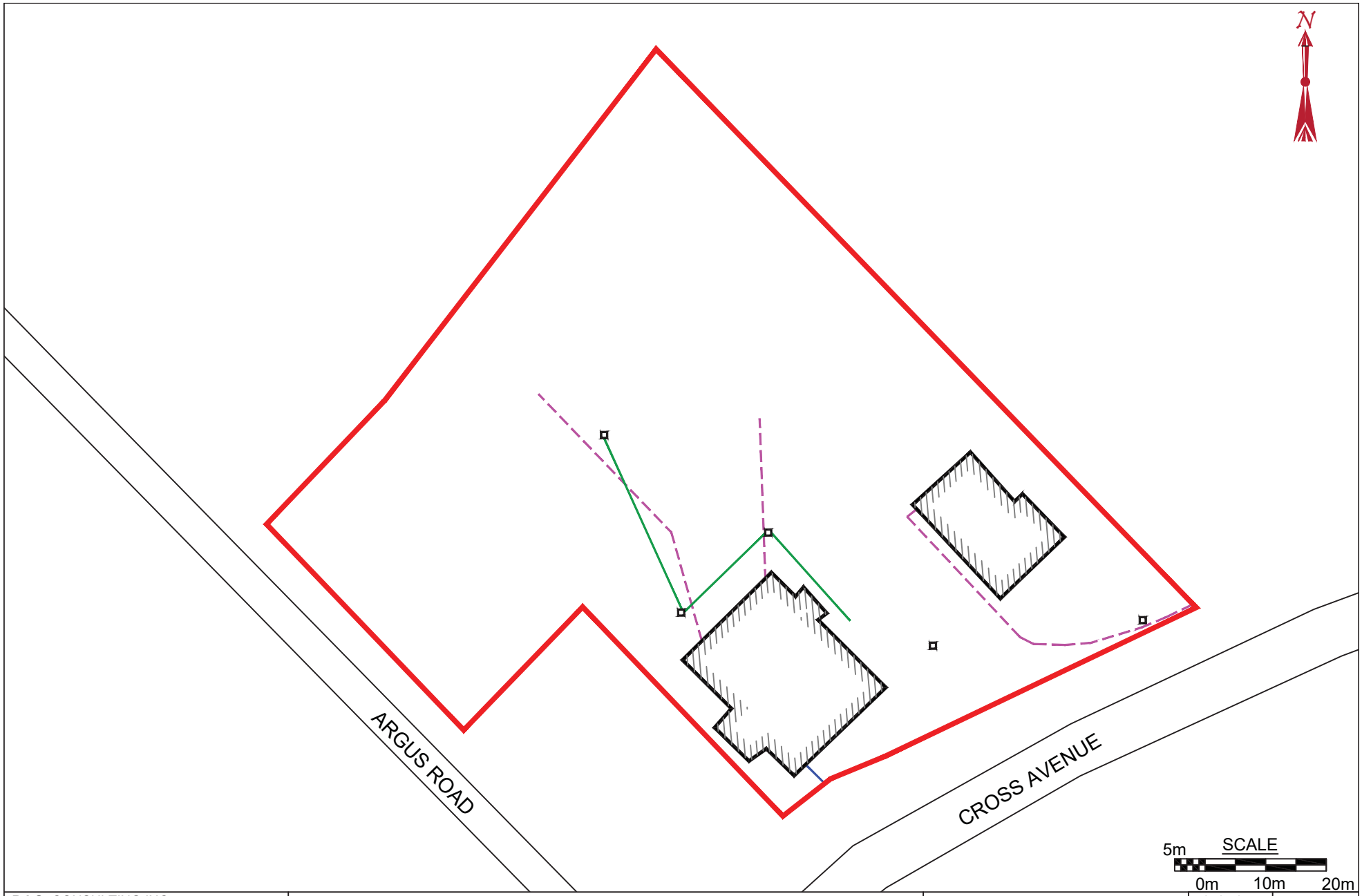
IMAGERY OBTAINED FROM TOPORAMA, NATURAL RESOURCES CANADA, 2017

TITLE AND LOCATION

SITE LOCATION PLAN

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	1



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LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- HYDRO SERVICE
- STORM LINE
- WATER SERVICE
- CATCH BASIN

TITLE AND LOCATION

SITE LAYOUT AND UTILITIES PLAN

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	2

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LEGEND

- SITE BOUNDARY
- PHASE TWO STUDY AREA BOUNDARY
- COMMERCIAL USE
- COMMUNITY USE
- PCA IDENTIFIER
- LOCATION OF UNDERGROUND STORAGE TANK (UST)

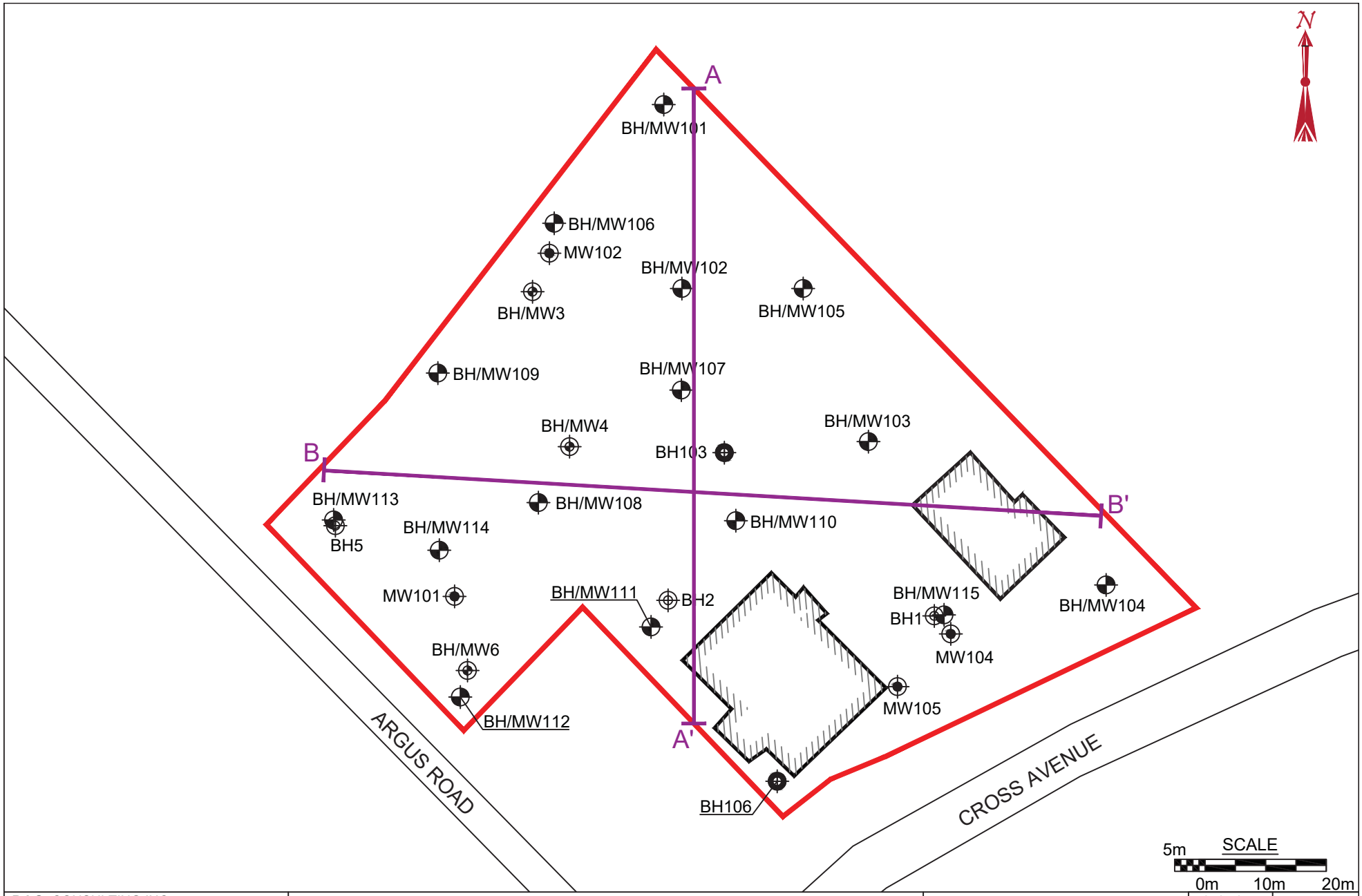
IMAGERY OBTAINED FROM COSINE ONLINE SERVICES, 2014

TITLE AND LOCATION

PHASE TWO STUDY AREA AND POTENTIALLY CONTAMINATING ACTIVITIES (PCAs)

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	3



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LEGEND

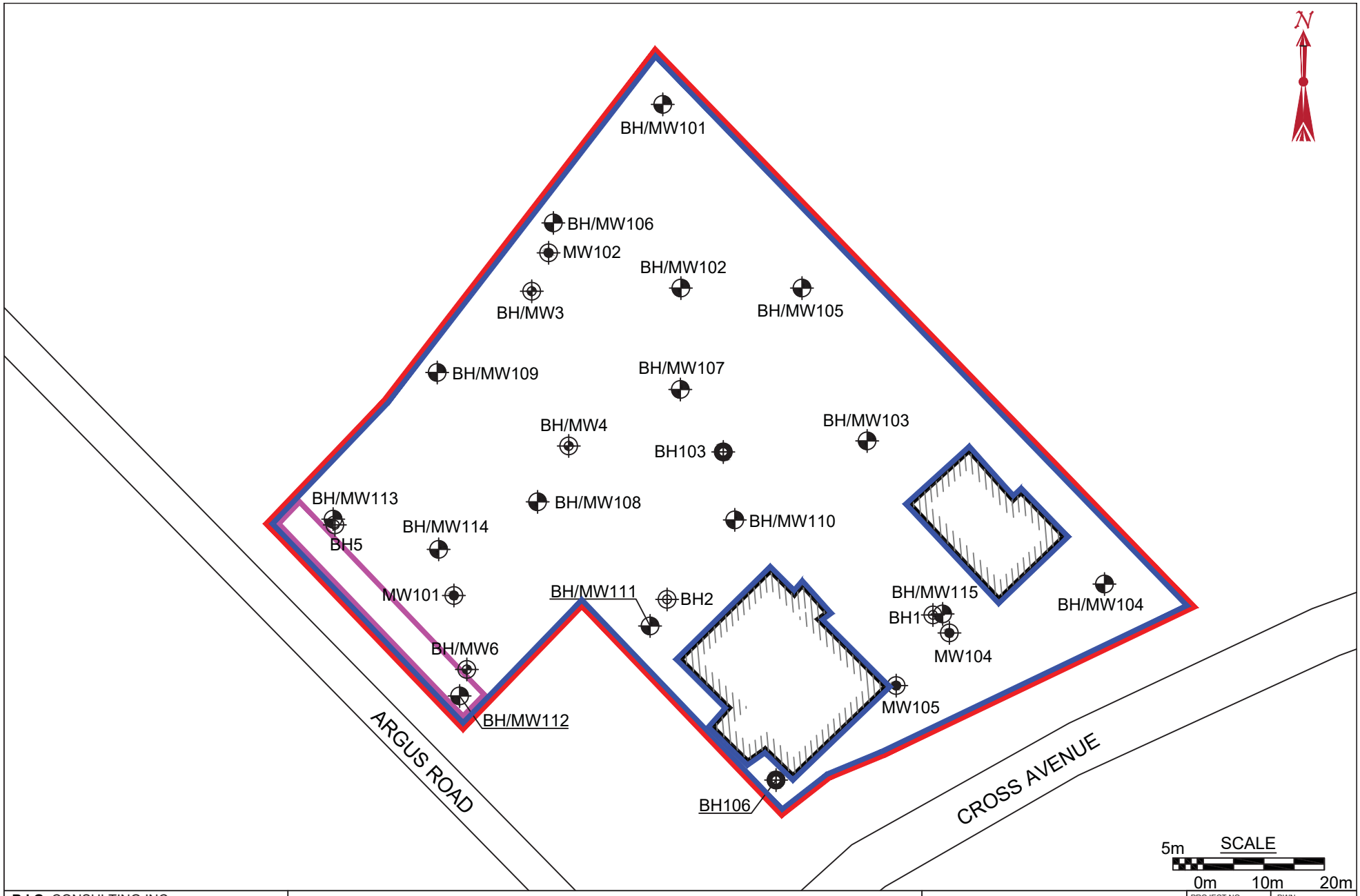
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- A A' GEOLOGICAL CROSS SECTION

TITLE AND LOCATION

BOREHOLE/MONITORING WELL LOCATION PLAN

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	4



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LEGEND

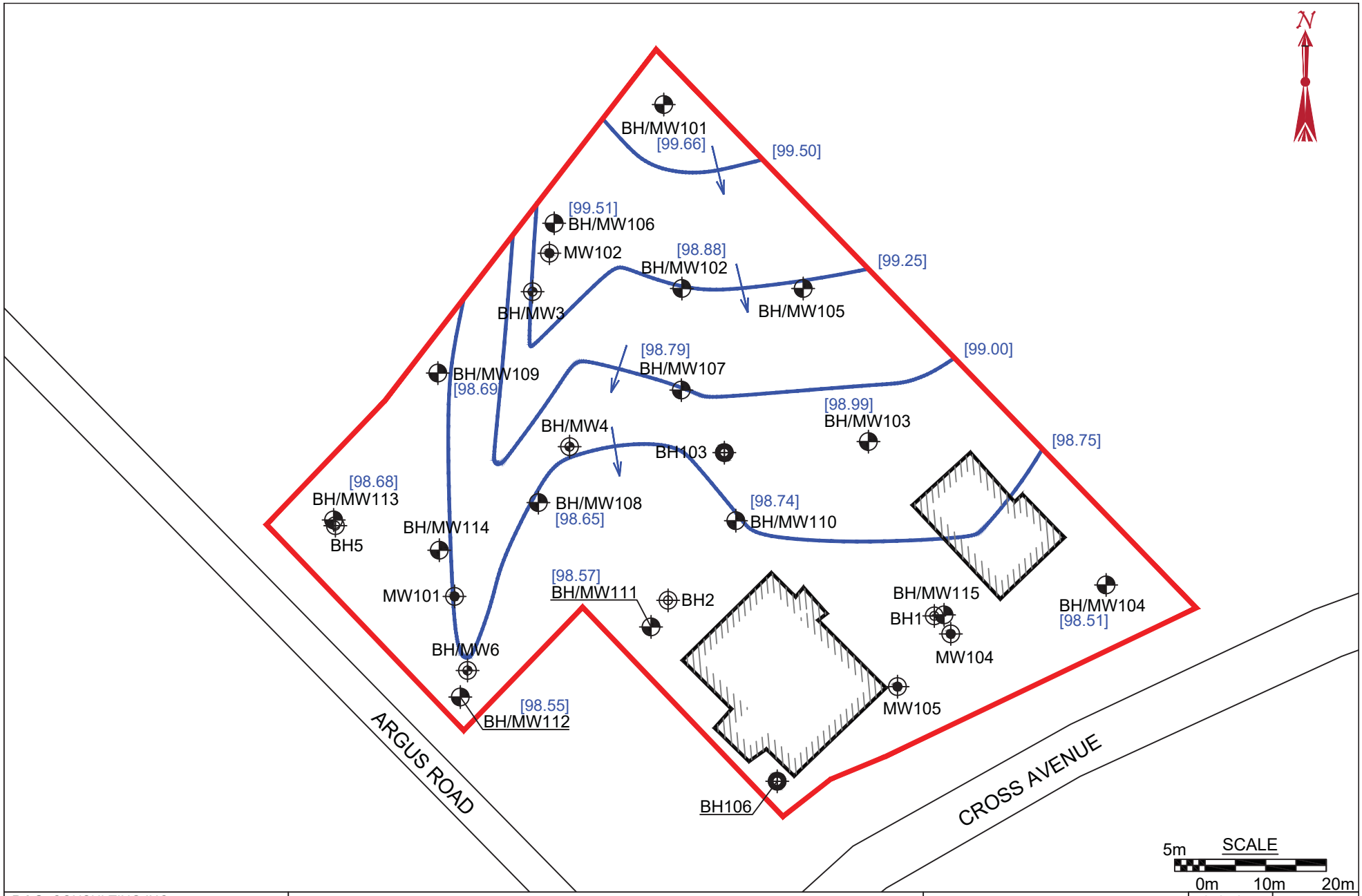
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- APECs 1+ 2
- APECs 3-7

TITLE AND LOCATION

SITE PLAN AND AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APECs)

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	5



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LEGEND

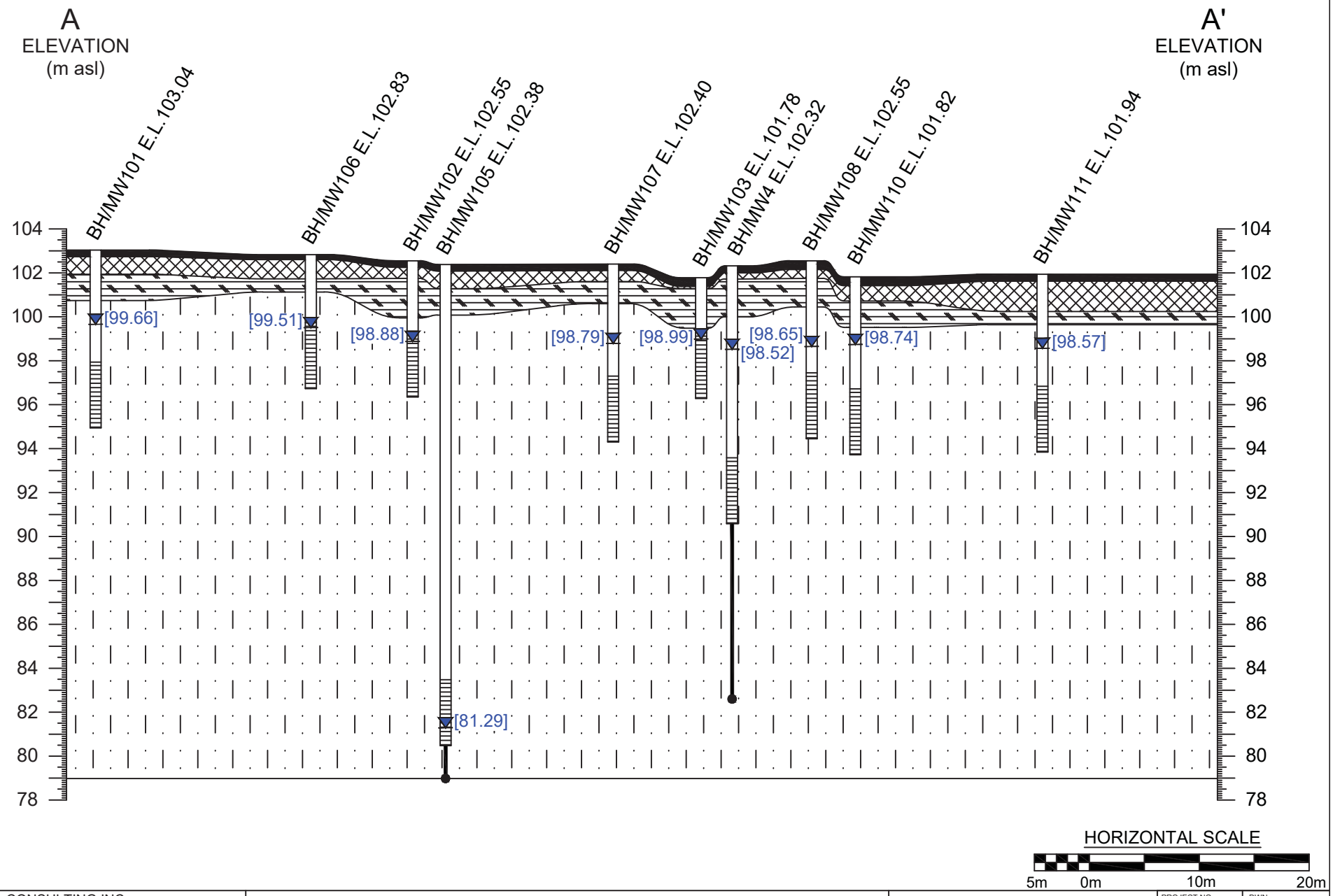
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- [XX.XX] WATER LEVEL MEASUREMENT (FEBRUARY 08,2021)
- GROUNDWATER CONTOUR
- INTERPRETED DIRECTION OF GROUNDWATER FLOW

TITLE AND LOCATION

GROUNDWATER CONTOUR MAP

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	6



HORIZONTAL SCALE

5m 0m 10m 20m

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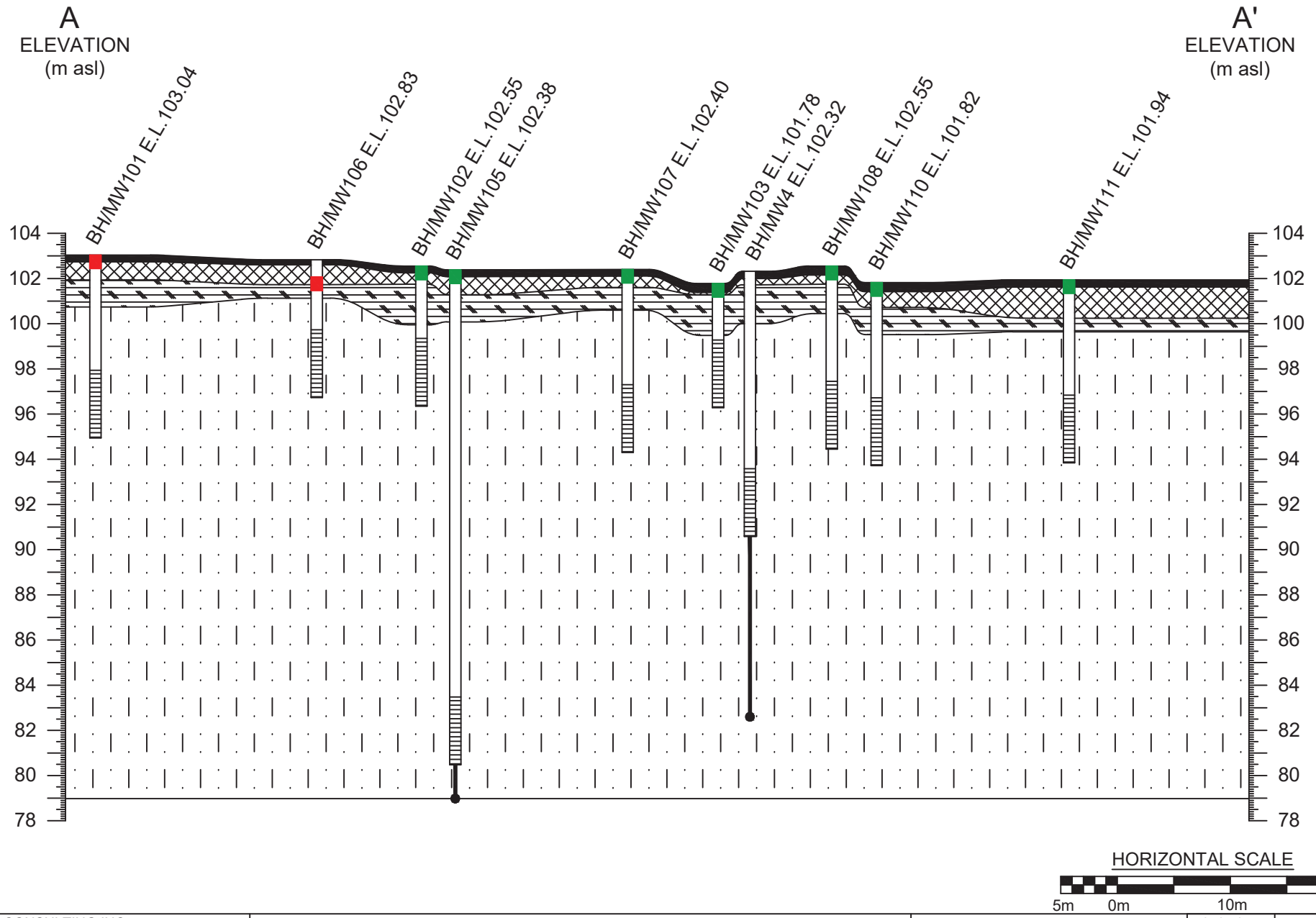
LEGEND

- ASPHALT / GRANULAR
- FILL
- CLAYEY SILT TILL
- SHALE BEDROCK
- WATER LEVEL
- [xx.xx] WATER LEVEL MEASUREMENT (FEBRUARY 08, 2021)

TITLE AND LOCATION

GEOLOGICAL CROSS SECTION A-A'
PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	7A



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LEGEND

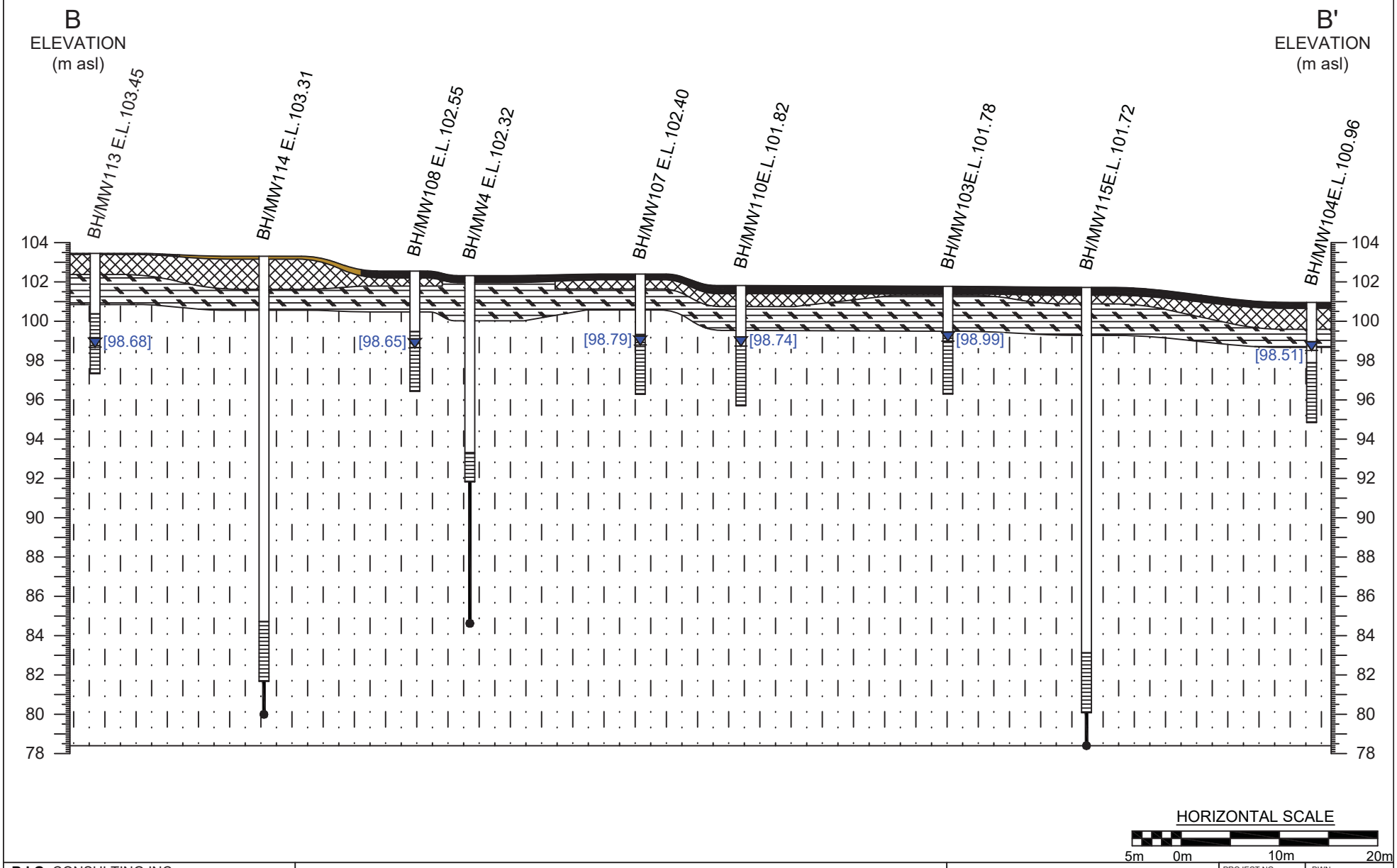
- ASPHALT / GRANULAR
- FILL
- CLAYEY SILT TILL
- SHALE BEDROCK
- MEETS MECP TABLE 2 SCS
- EXCEEDS MECP TABLE 2 SCS

TITLE AND LOCATION

GEOLOGICAL CROSS SECTION A-A' WITH METALS IMPACTS IN SOIL

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	7B



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LEGEND

- ASPHALT
- TOP SOIL
- GRANULAR
- FILL
- CLAYEY SILT TILL
- SHALE BEDROCK

WATER LEVEL

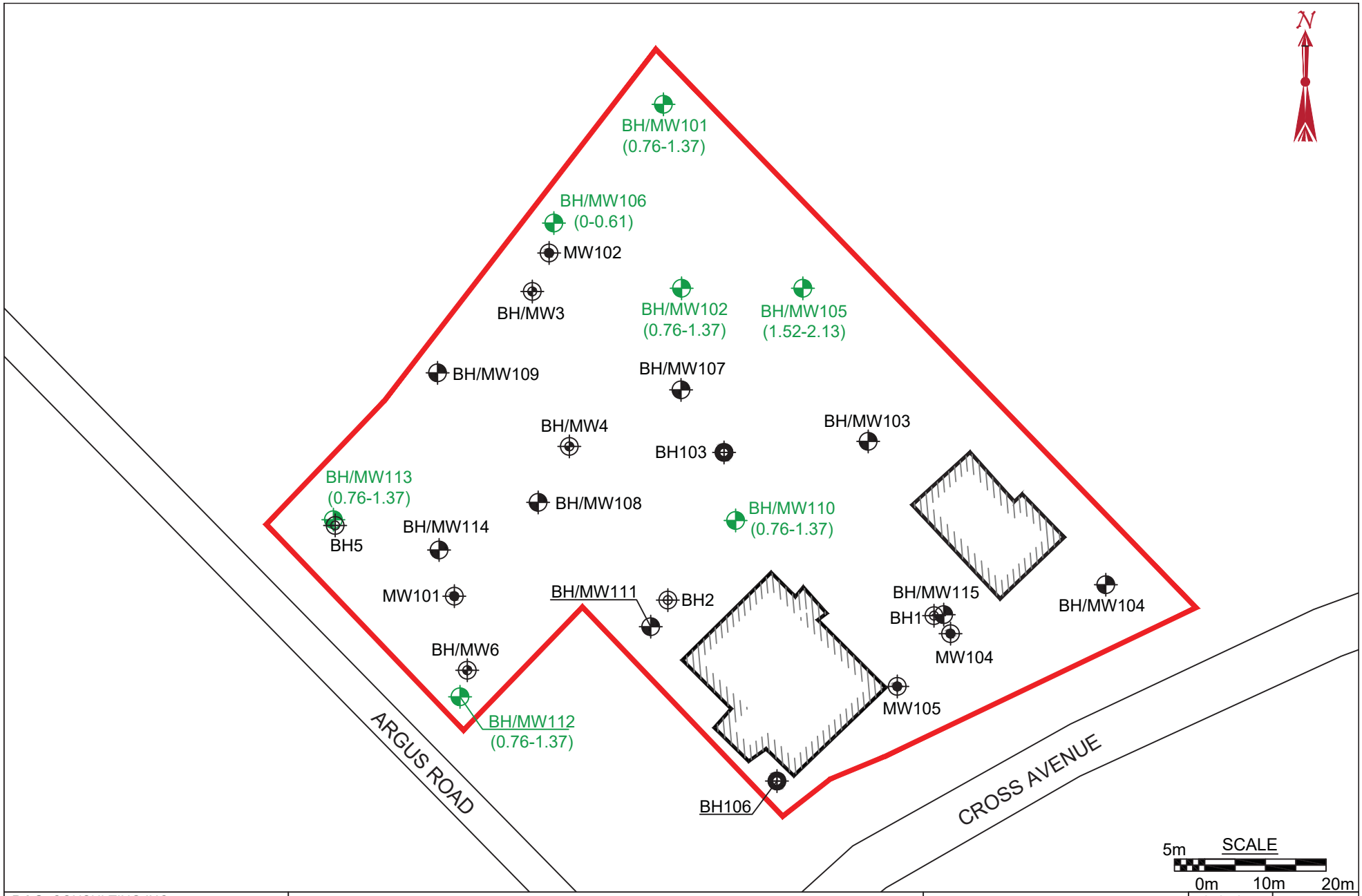
[xx.xx] WATER LEVEL MEASUREMENT (FEBRUARY 08, 2021)

TITLE AND LOCATION

GEOLOGICAL CROSS SECTION B-B'

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	8



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LEGEND

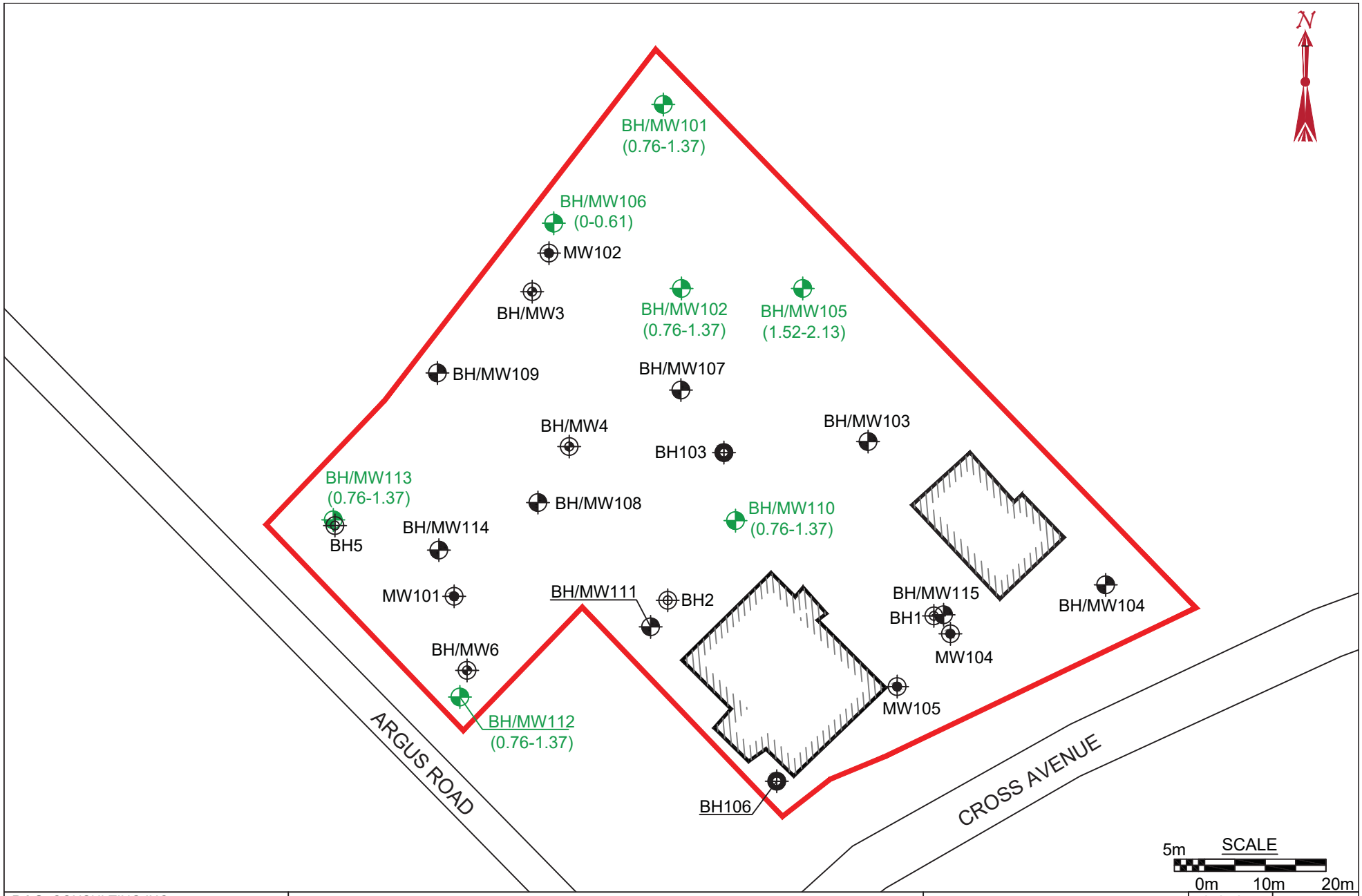
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- MEETS MECP TABLE 2 SCS
- EXCEEDS MECP TABLE 2 SCS
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

PHC AND BTEX CONCENTRATIONS IN SOIL

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	9



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LEGEND

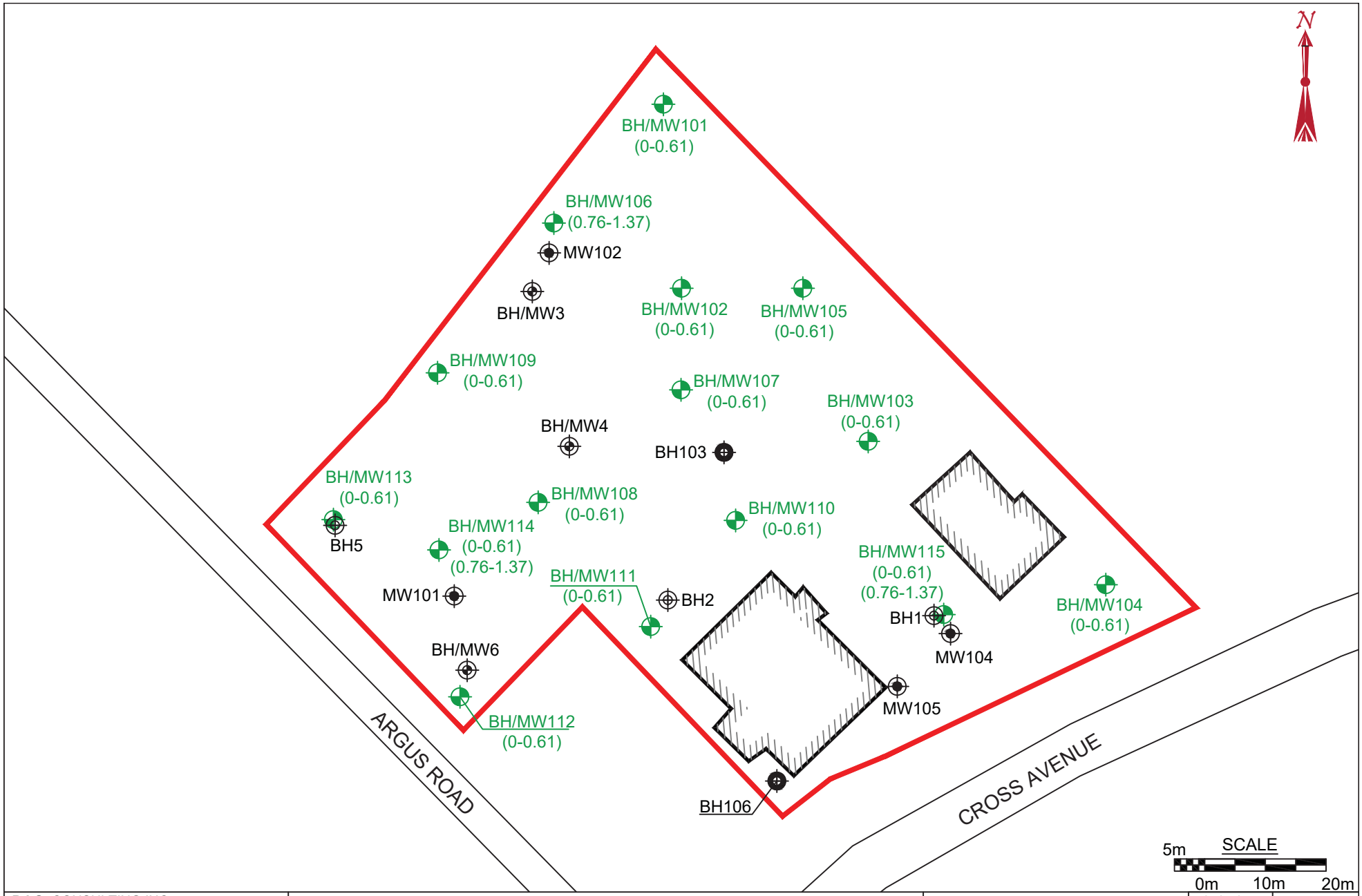
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- MEETS MECP TABLE 2 SCS
- EXCEEDS MECP TABLE 2 SCS
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

VOC CONCENTRATIONS IN SOIL

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	10



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LEGEND

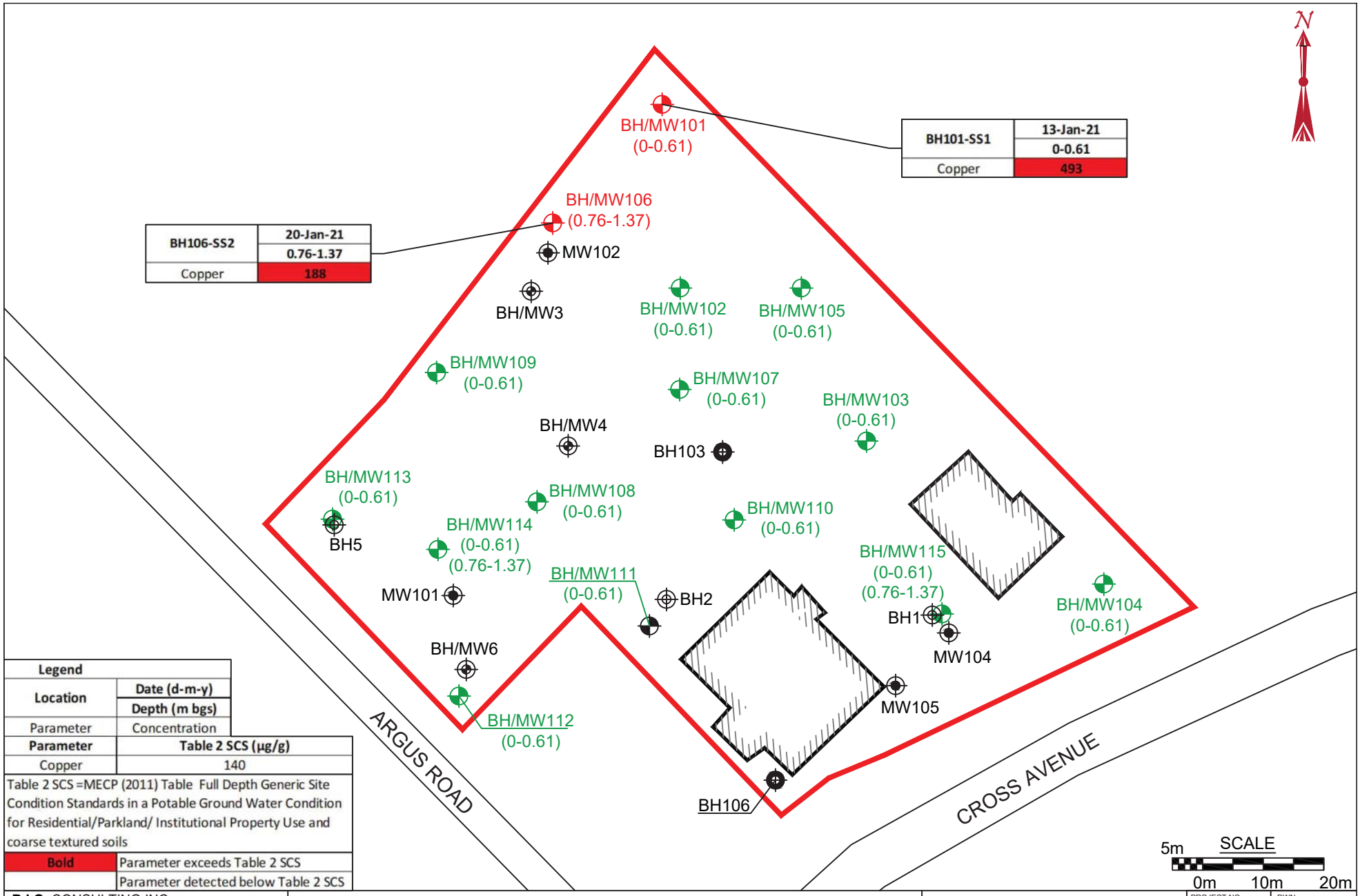
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- MEETS MECP TABLE 2 SCS
- EXCEEDS MECP TABLE 2 SCS
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

PAH CONCENTRATIONS IN SOIL

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	11



Legend	
Location	Date (d-m-y)
	Depth (m bgs)
Parameter	Concentration

Parameter	Table 2 SCS (µg/g)
Copper	140

Table 2 SCS =MECP (2011) Table Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential/Parkland/ Institutional Property Use and coarse textured soils

Bold	Parameter exceeds Table 2 SCS
	Parameter detected below Table 2 SCS

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LEGEND

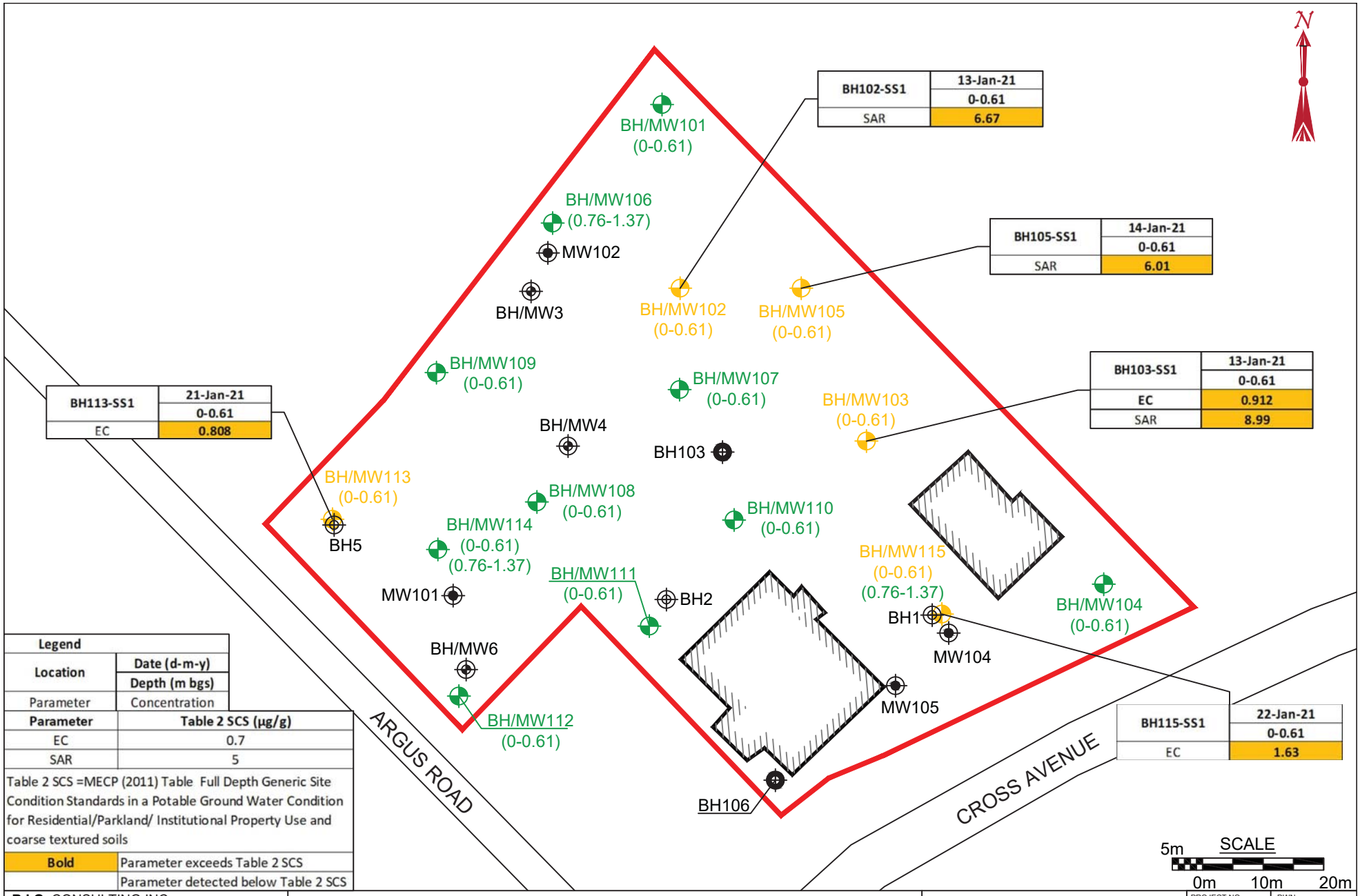
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- MEETS MECP TABLE 2 SCS
- EXCEEDS MECP TABLE 2 SCS
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

METALS AND INORGANICS IMPACTS IN SOIL

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	12



Legend	
Location	Date (d-m-y)
	Depth (m bgs)
Parameter	Concentration

Parameter	Table 2 SCS (µg/g)
EC	0.7
SAR	5

Table 2 SCS =MECP (2011) Table Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential/Parkland/ Institutional Property Use and coarse textured soils

Bold	Parameter exceeds Table 2 SCS
	Parameter detected below Table 2 SCS

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LEGEND

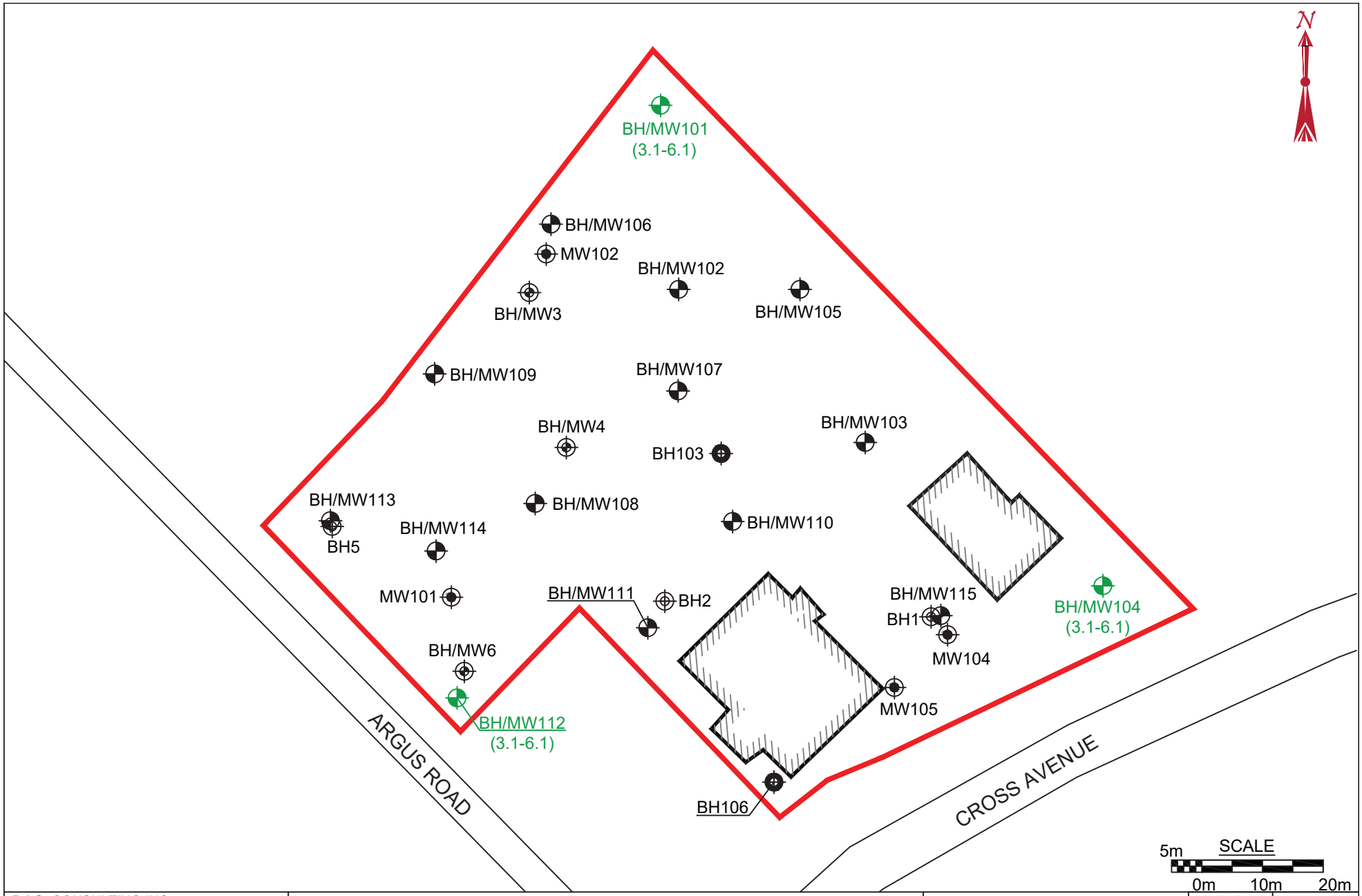
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- MEETS MECP TABLE 2 SCS
- EXCEEDS MECP TABLE 2 SCS
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

EC AND SAR IMPACTS IN SOIL

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	13



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LEGEND

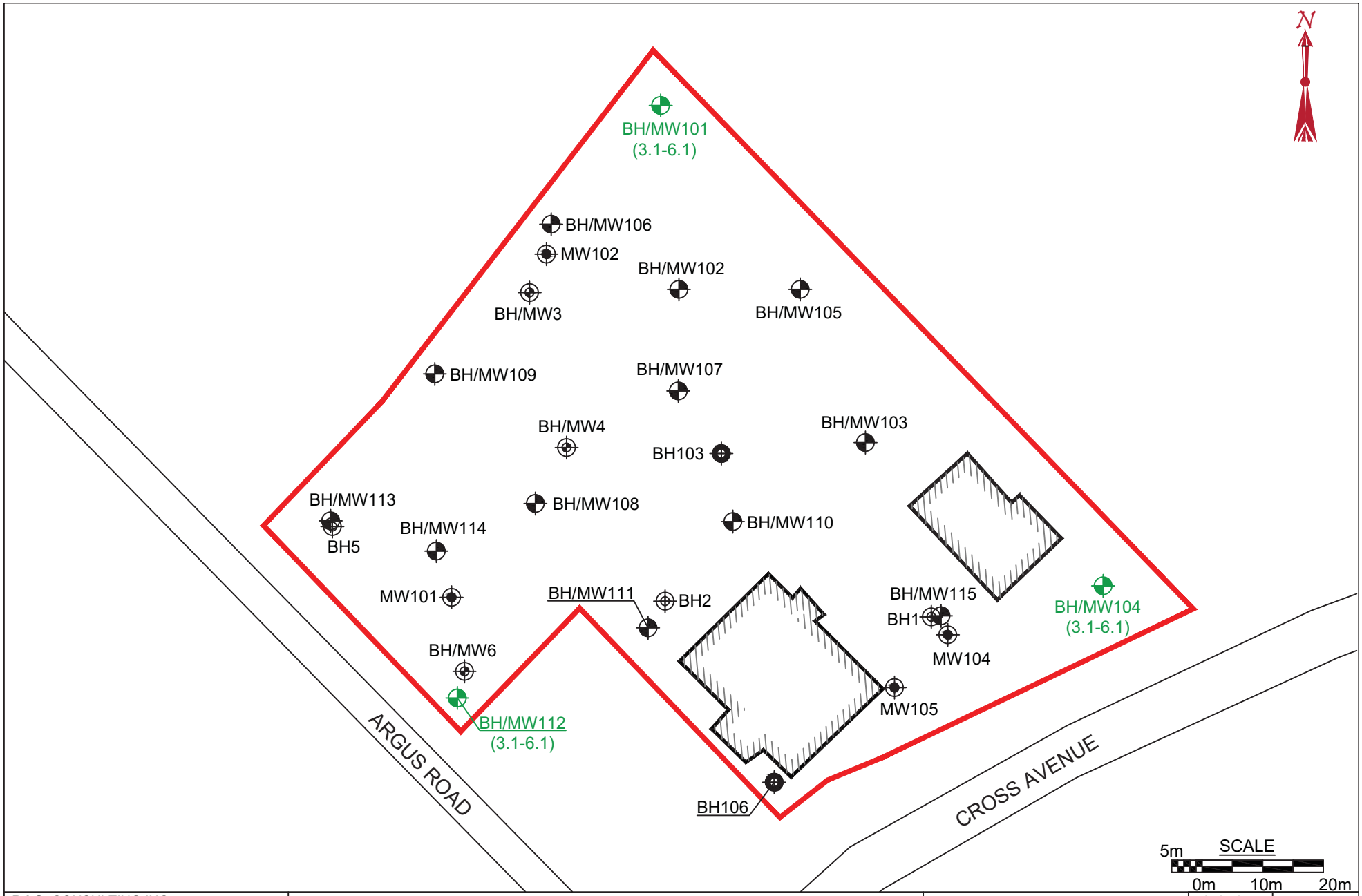
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- MEETS MECP TABLE 2 SCS
- EXCEEDS MECP TABLE 2 SCS
- [xx.xx] WELL SCREEN DEPTH (m bgs)

TITLE AND LOCATION

PHC AND BTEX CONCENTRATIONS IN GROUNDWATER

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	14



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LEGEND

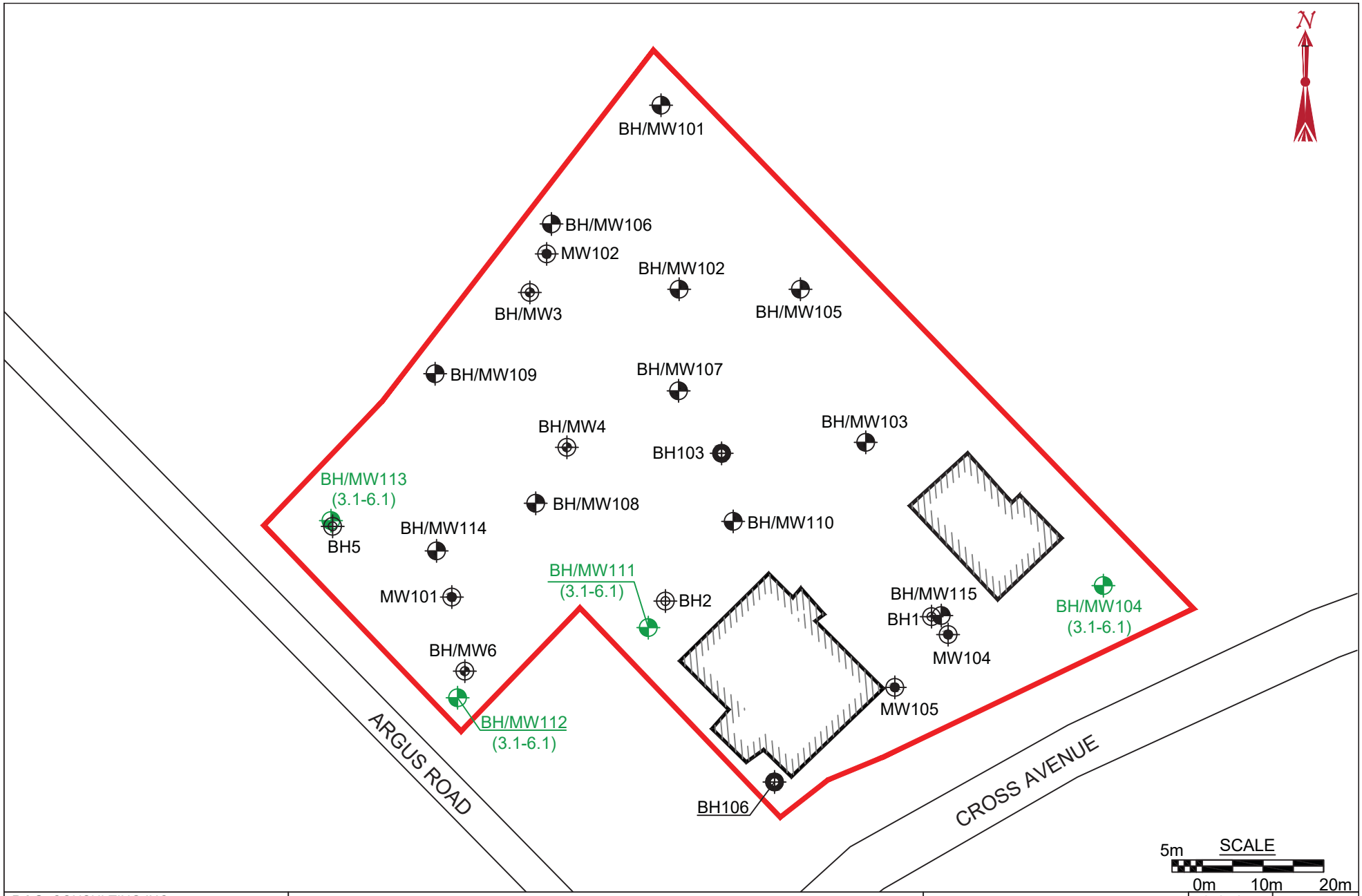
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- MEETS MECP TABLE 2 SCS
- EXCEEDS MECP TABLE 2 SCS
- [xx.xx] WELL SCREEN DEPTH (m bgs)

TITLE AND LOCATION

VOC CONCENTRATIONS IN GROUNDWATER

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	15



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Mississauga, ON L4W 2Z4
Canada

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LEGEND

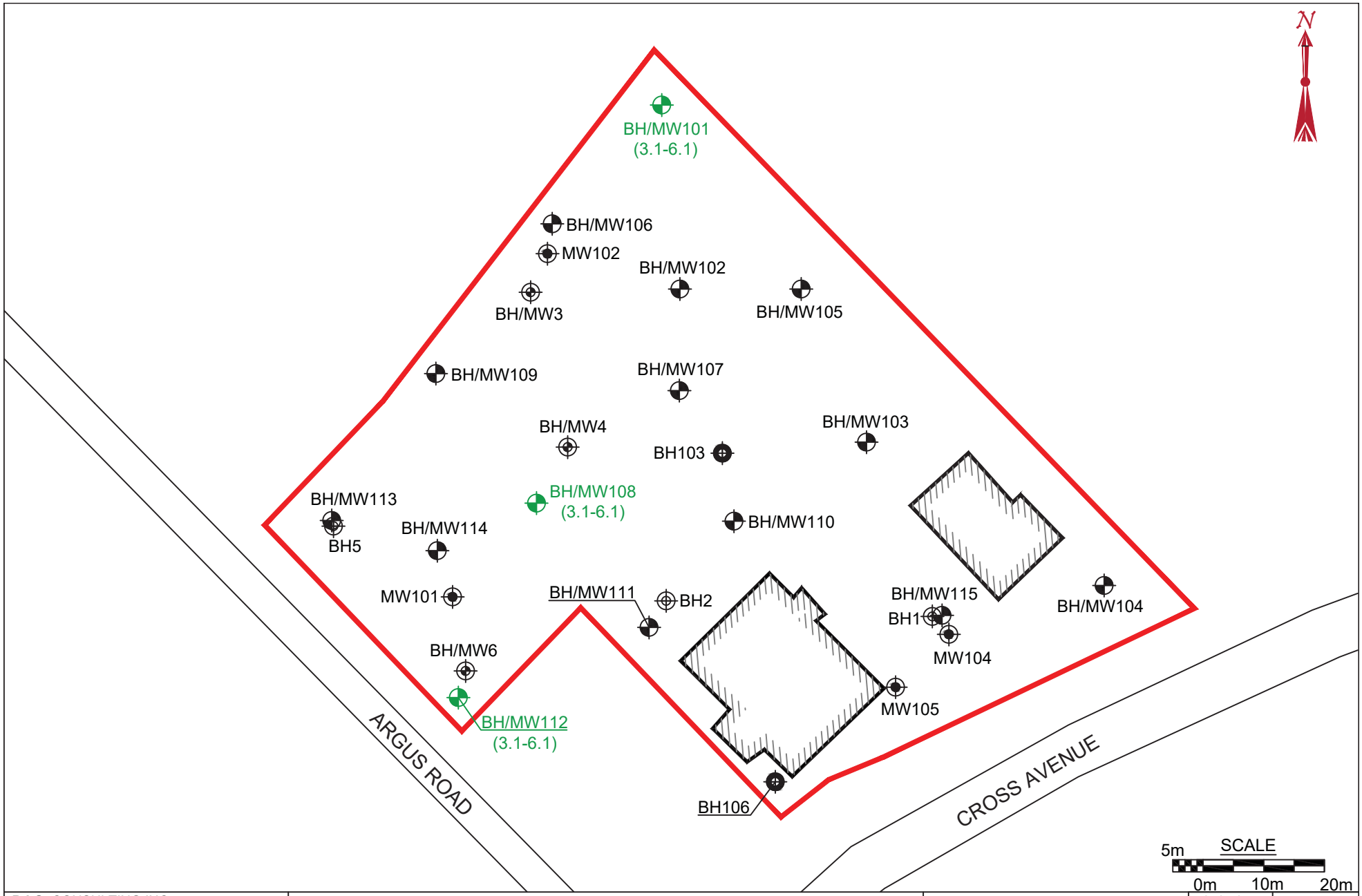
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- MEETS MECP TABLE 2 SCS
- EXCEEDS MECP TABLE 2 SCS
- [xx.xx] WELL SCREEN DEPTH (m bgs)

TITLE AND LOCATION

PAH CONCENTRATIONS IN GROUNDWATER

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	16



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LEGEND

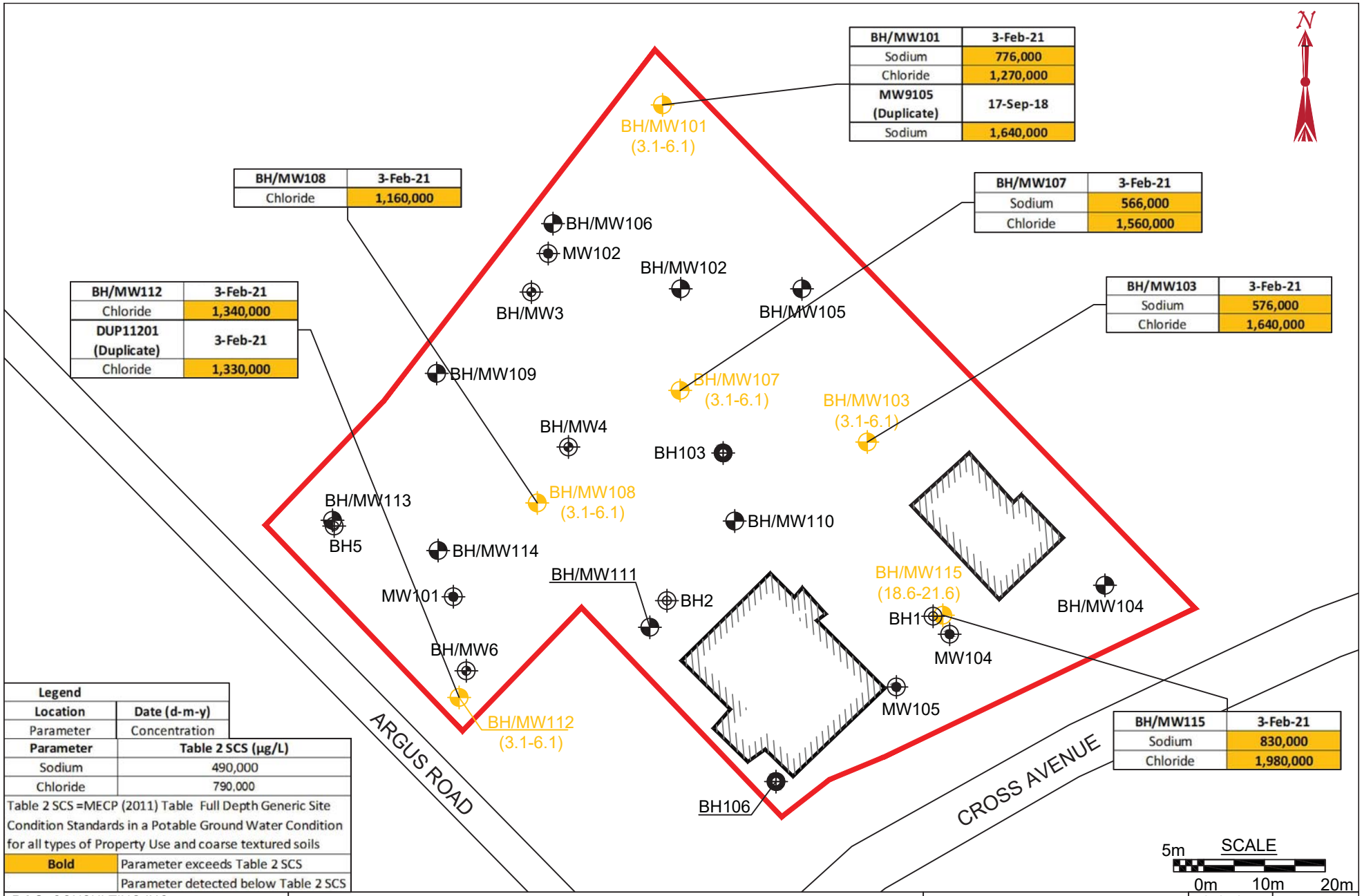
- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- MEETS MECP TABLE 2 SCS
- EXCEEDS MECP TABLE 2 SCS
- [xx.xx] WELL SCREEN DEPTH (m bgs)

TITLE AND LOCATION

METALS CONCENTRATIONS IN GROUNDWATER

PHASE TWO ESA
217 AND 227 CROSS AVENUE
AND 571 ARGUS ROAD,
OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	17



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LEGEND

- SITE BOUNDARY
- APPROXIMATE BUILDING FOOTPRINT
- BOREHOLE/MONITORING WELL LOCATION (BIG 2021)
- BOREHOLE/PIEZOMETER LOCATION (BIG 2019)
- BOREHOLE LOCATION (BIG 2019)
- BOREHOLE/MONITORING LOCATION (TERRAPEX)
- BOREHOLE LOCATION (TERRAPEX)
- MEETS MECP TABLE 2 SCS
- EXCEEDS MECP TABLE 2 SCS
- [xx.xx] WELL SCREEN DEPTH (m bgs)

TITLE AND LOCATION

SODIUM AND CHLORIDE CONCENTRATIONS IN GROUNDWATER

PHASE TWO ESA
217 AND 227 CROSS AVENUE AND 571 ARGUS ROAD, OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-349B	O.A.
SCALE	CK.
AS NOTED	M.V.
DATE	FIG NO.
FEBRUARY 2021	18

Appendix A - Sampling and Analysis Plan

1. Introduction

This appendix presents the Sampling and Analysis Plan (SAAP) that was developed in support of the Phase Two Environmental Site Assessment (ESA), which will be conducted to provide further characterization of the Site subsurface conditions. The SAAP presents the procedures and measures that will be undertaken during field investigative activities to characterize the Site conditions and meet the data quality objectives of the Phase Two ESA.

The SAAP presents the sampling program proposed for the Site, the recommended procedures and protocols for sampling and related field activities, the data quality objectives, and the quality assurance/quality control (QA/QC) measures that will be undertaken to provide for the collection of accurate, reproducible and representative data. These components are described in further detail below.

2. Field Sampling Program

The field sampling program was developed to provide for the collection of samples of the surficial and subsurface soil materials for chemical analysis of parameters identified as potential contaminants of concern as identified in the Phase One ESA.

The soil samples will be collected from of the surficial fill and overburden material. The groundwater samples will be collected from each monitoring well.

The monitoring wells will be installed at selected boreholes to intercept the groundwater table aquifer. The monitoring wells will be installed with 3.05 m long screens extending to a maximum depth of approximately 23.42 m below grade.

Elevation of the boreholes and monitoring wells will be obtained through the completion of an elevation survey with reference to a Site temporary benchmark or a local geodetic benchmark. Groundwater flow will be determined through groundwater level measurements and the relative groundwater elevations established in the Site elevation survey.

3. Field Methods

To meet the requirements of the field sampling program, the following field investigative methods will be undertaken:

a) Borehole Drilling;
b) Soil Sampling;
c) Monitoring Well Installation;
d) Monitoring Well Development;
e) Groundwater Level Measurements;
f) Elevation Survey;
g) Groundwater Sampling; and
h) Residue Management Procedures.

The field investigative methods will be performed as described below:

a) Borehole Drilling

Boreholes will be advanced at the Site to facilitate the collection of soil samples for chemical analysis and geologic characterization and for the installation of groundwater monitoring wells. Boreholes will be advanced at the Site to a maximum depth of approximately 23.42 m below grade, within the overburden materials to provide for the collection of soil samples beneath the Site. The borehole locations will be selected to assess soil and groundwater quality at the Site.

Prior to borehole drilling, utility clearances will be obtained from public locators, as required. Boreholes will be advanced into the surficial fill and overburden soils by a drilling company under the full-time supervision of BIG staff. A track mounted drilling machine equipped with hollow stem or solid stem augers and split spoons will be utilized to advance the boreholes through the overburden materials.

b) Soil Sampling

Soil samples for geologic characterization and chemical analysis will be collected from the overburden boreholes using 5 cm diameter, 61 cm long, stainless steel split-spoon sampling devices advanced ahead of the augers. The split-spoon samplers will be attached to drill rods and advanced into the soil by means of a machine-driven hammer. Spilt-spoon soil samples will be collected where possible, beginning at the ground surface and subsequently at continuous intervals. Geologic and sampling details of the recovered cores will be logged and the samples will be assessed for the potential presence of non-aqueous phase liquids. A portion of each soil sample will be placed in a sealed “zip-lock” plastic bag and allowed to reach ambient temperature prior to field screening with a photoionization detector (PID) that will be calibrated by the supplier with an appropriate reference gas and zeroed in ambient conditions prior to use. The vapour measurements will be made by inserting the instrument’s probe into the plastic bag while manipulating the sample to ensure volatilization of the soil gases. These readings will provide a real-time indication of the relative concentration of volatile organic vapours encountered in the subsurface during drilling. Samples for chemical analysis will be selected on the basis of visual, combustible gas and olfactory evidence of impacts and at specific intervals to define the lateral and vertical extent of suspected impacts.

Recommended volumes of soil samples selected for chemical analysis will be collected into pre-cleaned, laboratory supplied, analytical test group specific containers. The samples will be placed into clean insulated coolers chilled with ice for storage and transport. Samples intended for VOC analysis will be collected using a laboratory-supplied soil core sampler, placed into the vials containing methanol for preservation purposes and sealed using Teflon lined septa lids. The samples will be assigned unique identification numbers, and the date, time, location, and requested analyses for each sample will be documented in a bound field notebook. The samples will be submitted to a CAEL certified laboratory within analytical test group holding times under Chain of Custody (COC) protocols. New disposable chemical resistant gloves will be used during the handling and sample collection for each soil core to prevent sample cross-contamination.

c) Monitoring Well Installation

Monitoring wells will be installed in general accordance with Ontario Regulation 903/90, as amended and will be installed by a licensed well contractor.

The monitoring wells will be constructed using 50 mm diameter, Schedule 40, PVC riser pipe and number 10 slot size (0.25 mm) well screens. The base of the well screens will be sealed with PVC end caps. All well pipe connections will be factory machined threaded flush couplings. The pipe components will be pre-wrapped in plastic, which will be removed prior to insertion in the borehole to minimize the potential for contamination. No lubricants or adhesives will be used in the construction of the monitoring wells. The annular space around the well screens will be backfilled with silica sand to at least 0.3 m above the top of the screen. Granular bentonite will be placed in the borehole annulus from the top of the sand pack to approximately grade. The monitoring wells will be completed with protective casings.

d) Monitoring Well Development

Monitoring wells will be developed to remove fine sediment particles potentially lodged in the sand pack and well screen to enhance contact with the surrounding formation groundwater and will be developed using dedicated bailers. Monitoring well development will be monitored by multiparameter water quality meter, visual observations of turbidity, and by taking field measurements of pH and conductivity for every well volume removed. Standing water volumes will be determined by means of a water level meter. Water quality parameter measurements will be recorded using a multiparameter water quality meter. A minimum of approximately three (3) well volumes will be removed; and, well development will continue until the purged water has chemically stabilized as indicated by field parameters measurements.

Well development details will be documented on a well development log sheet or in a bound hard cover notebook. All water accumulated during well development will be collected and stored in sealed containers.

e) Groundwater Level Measurements

Groundwater level measurements will be recorded from monitoring wells to determine groundwater flow and direction at the Site. Water levels will be measured with respect to the top of the casing by means of a groundwater level meter. The water levels will be recorded on water level log sheets or in a bound field notebook. The water level meter probe will be decontaminated between monitoring well locations.

f) Elevation Survey

An elevation survey will be conducted to obtain vertical control of the newly installed monitoring well locations. The top of casing and ground surface elevation of each monitoring well location will be surveyed against a known geodetic benchmark, or if unavailable, against a suitable arbitrary temporary benchmark. Elevations measured against a geodetic benchmark will be recorded as meters above mean sea level (m AMSL). The arbitrary temporary benchmark will be assigned an elevation of 100.00 m. The elevation survey will be accurate to within ± 1 cm.

g) Groundwater Sampling

Groundwater samples will be collected from monitoring wells for chemical analysis. The monitoring wells will be purged first of three to five wetted well volumes of water, or until dry, to remove standing water and draw in fresh formation water as previously described. Dedicated well materials will be used for well purging and sample collection.

Recommended groundwater sample volumes will be collected into pre-cleaned, laboratory-supplied vials or bottles provided with analytical test group specific preservatives, as required. The samples will be placed in an insulated cooler chilled with ice for storage and transport. Where needed, bottles will be checked for head-space.

All groundwater samples will be assigned unique identification numbers, and the date, time, project number and company name will be specified on each bottle. The samples will be submitted to the contractual laboratory within analytical test group holding times under COC protocols. New disposable chemical resistant gloves will be used for each sampling location to prevent sample cross-contamination.

h) Residue Management Procedures

The residue materials produced during the borehole drilling, soil sampling programs and monitoring well sampling programs comprised of decontamination fluids from equipment cleaning, and waters from well development and purging will be placed in sealed drums for future off-Site disposal.

4. Field Quality Assurance/Quality Control Program

The objective of the field quality assurance/quality control (QA/QC) program is to obtain soil and groundwater samples and other field measurements that provide data of acceptable quality that meets the objectives of the Phase Two ESA. The objectives of the QA/QC program will be achieved through the implementation of procedures for the collection of unbiased (i.e., non-contaminated) samples, sample documentation and the collection of appropriate QC samples to provide a measure of sample reproducibility and accuracy. The field QA/QC measures will comprise:

a) Decontamination Protocols;
b) Equipment Calibration;
c) Sample Preservation;
d) Sample Documentation; and,
e) Field Quality Control Samples.

Details on the field QA/QC measures are provided in the following sections.

a) Decontamination Protocols

Decontamination protocols will be followed during field sampling where non-dedicated sampling equipment is used to prevent sample cross contamination. For the borehole drilling and soil sampling, split soil sampling devices will be cleaned/decontaminated between sampling intervals and auger flights between borehole locations. For the monitoring well installation, well components are not to come into contact with the ground surface prior to insertion into

boreholes. Electronic water level meters will be decontaminated between monitoring well locations during well development, purging activities and rising head tests. All decontamination fluids will be collected and stored in sealed containers.

b) Equipment Calibration

All equipment requiring calibration will be calibrated according to manufacturer's requirements using analytical grade reagents, or by the supplier prior to conducting field activities.

c) Sample Preservation

All samples will be preserved using appropriate analytical test group specific reagents, as required, and upon collection placed in ice-filled insulated coolers for storage and transport.

d) Sample Documentation

All samples will be assigned a unique identification number, which is to be recorded along with the date, time, project number and company name. All samples will be handled and transported following COC protocols.

e) Field Quality Control Samples

Field quality controls samples will be collected to evaluate the accuracy and reproducibility of the field sampling procedures. Where required, for groundwater samples, a trip blank prepared by a laboratory will be submitted for chemical analysis to evaluate the potential for sample cross-contamination or bias. The recommended alert criteria for the trip blank sample are the detections of any test group analyte at a concentration in excess of laboratory detection limits.

Appendix B – Analytical Results

AGAT Workorder					21T700748	21T700748	21T700748	21T700748	21T700748	21T703878	21T703878	21T703878	21T703878
Date Sampled					01/13/21	01/13/21	01/13/21	01/13/21	01/14/21	01/20/21	01/20/21	01/20/21	01/21/21
Sample Description					BH101-SS1	BH102-SS1	BH103-SS1	BH104-SS1	BH105-SS1	BH106-SS2	BH107-SS1	BH108-SS1	BH109-SS1
Package Name	**Parameter Name**	**Unit**	**RDL**	**ON T2 S RPI CT**	**1966584**	**1966586**	**1966588**	**1966589**	**1966590**	**2011445**	**2011446**	**2011447**	**2011448**
Matrix Soil: Metals	Antimony	µg/g	0.8	7.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Matrix Soil: Metals	Arsenic	µg/g	1	18	13	8	9	10	12	7	6	7	7
Matrix Soil: Metals	Barium	µg/g	2	390	122	141	40	48	41	72.2	99.3	78.2	92.3
Matrix Soil: Metals	Beryllium	µg/g	0.4	4	0.5	0.6	<0.5	<0.5	<0.5	0.6	0.6	0.6	0.6
Matrix Soil: Metals	Boron	µg/g	5	120	10	7	12	11	9	10	7	8	9
Matrix Soil: Metals	Boron (Hot Water Soluble)	µg/g	0.1	1.5	0.33	0.58	0.2	0.18	0.21	0.62	0.37	0.39	0.28
Matrix Soil: Metals	Cadmium	µg/g	0.5	1.2	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Matrix Soil: Metals	Chromium	µg/g	5	160	18	17	7	6	6	22	23	23	24
Matrix Soil: Metals	Chromium, Hexavalent	µg/g	0.2	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Matrix Soil: Metals	Cobalt	µg/g	0.5	22	11.5	10.7	5.9	5.4	4.9	13.6	14.2	14.3	14
Matrix Soil: Metals	Copper	µg/g	1	140	493	80	33	31	44	188	46.9	37.9	43.3
Matrix Soil: Metals	Cyanide, Free	µg/g	0.04	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Matrix Soil: Metals	Electrical Conductivity (2:1)	mS/cm	0.005	0.7	0.47	0.664	0.912	0.269	0.488	0.402	0.386	0.331	0.362
Matrix Soil: Metals	Lead	µg/g	1	120	18	21	21	23	28	12	13	17	14
Matrix Soil: Metals	Mercury	µg/g	0.1	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Matrix Soil: Metals	Molybdenum	µg/g	0.5	6.9	1.6	1.3	1.1	1.2	1.1	0.7	<0.5	0.5	<0.5
Matrix Soil: Metals	Nickel	µg/g	1	100	23	22	10	11	10	27	30	29	30
Matrix Soil: Metals	pH, 2:1 CaCl2 Extraction	pH Units	NA	5.0-9.0	6.18	7.66	7.83	7.83	7.91	7.93	7.8	7.7	7.76
Matrix Soil: Metals	Selenium	µg/g	0.4	2.4	0.8	0.9	0.5	0.5	0.5	<0.8	<0.8	<0.8	<0.8
Matrix Soil: Metals	Silver	µg/g	0.2	20	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5
Matrix Soil: Metals	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	N/A	5	4.15	6.67	8.99	1.03	6.01	4.81	4.25	1.83	2.08
Matrix Soil: Metals	Thallium	µg/g	0.4	1	<0.4	<0.4	<0.4	<0.4	<0.4	<0.5	<0.5	<0.5	<0.5
Matrix Soil: Metals	Uranium	µg/g	0.5	23	1.3	1.4	0.5	0.6	<0.5	0.78	0.73	0.8	0.66
Matrix Soil: Metals	Vanadium	µg/g	0.4	86	26	27	12	10	11	29.8	32.6	29.2	33.1
Matrix Soil: Metals	Zinc	µg/g	5	340	121	101	142	169	106	66	68	74	75

Guideline Legend:	Exceeds Guideline
	Within Guideline
	Below RDL

AGAT Workorder					21T703878	21T703878	21T703878	21T703878	21T703878	21T703878	21T703878	21T703878	21T705007
Date Sampled					01/21/21	01/21/21	01/21/21	01/21/21	01/21/21	01/21/21	01/22/21	01/22/21	01/21/21
Sample Description					BH110-SS1	BH111-SS1	BH112-SS1	BH113-SS1	BH114-SS1	BH114-SS2	BH115-SS1	BH115-SS2	DUP011402
Package Name	**Parameter Name**	**Unit**	**RDL**	**ON T2 S RPI CT**	**2011449**	**2011451**	**2011452**	**2011454**	**2011456**	**2011457**	**2011458**	**2011459**	**2020967**
Matrix Soil: Metals	Antimony	µg/g	0.8	7.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Matrix Soil: Metals	Arsenic	µg/g	1	18	7	7	6	10	7	6	7	6	5
Matrix Soil: Metals	Barium	µg/g	2	390	46.4	65.6	89.5	109	85.2	76.5	67.5	62.4	70.6
Matrix Soil: Metals	Beryllium	µg/g	0.4	4	<0.4	0.4	0.6	0.4	0.5	0.5	<0.4	0.6	0.5
Matrix Soil: Metals	Boron	µg/g	5	120	9	10	9	9	8	7	10	8	10
Matrix Soil: Metals	Boron (Hot Water Soluble)	µg/g	0.1	1.5	0.29	0.31	0.64	0.57	0.54	0.45	0.54	0.31	0.35
Matrix Soil: Metals	Cadmium	µg/g	0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5
Matrix Soil: Metals	Chromium	µg/g	5	160	10	17	24	19	19	21	10	23	19
Matrix Soil: Metals	Chromium, Hexavalent	µg/g	0.2	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Matrix Soil: Metals	Cobalt	µg/g	0.5	22	6	9.1	14.6	10.5	9.7	12.1	5.8	15	10.2
Matrix Soil: Metals	Copper	µg/g	1	140	25.4	47.7	37.4	62.3	70.7	59.7	37.2	34.6	42.6
Matrix Soil: Metals	Cyanide, Free	µg/g	0.04	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Matrix Soil: Metals	Electrical Conductivity (2:1)	mS/cm	0.005	0.7	0.648	0.444	0.267	0.808	0.319	0.371	1.63	0.248	0.3
Matrix Soil: Metals	Lead	µg/g	1	120	19	17	14	47	29	13	34	16	10
Matrix Soil: Metals	Mercury	µg/g	0.1	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Matrix Soil: Metals	Molybdenum	µg/g	0.5	6.9	0.9	1	<0.5	0.9	0.8	0.7	1.1	<0.5	0.6
Matrix Soil: Metals	Nickel	µg/g	1	100	11	21	30	22	22	26	12	30	21
Matrix Soil: Metals	pH, 2:1 CaCl2 Extraction	pH Units	NA	5.0-9.0	7.99	7.7	7.67	7.7	7.66	7.6	7.66	7.71	7.37
Matrix Soil: Metals	Selenium	µg/g	0.4	2.4	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Matrix Soil: Metals	Silver	µg/g	0.2	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Matrix Soil: Metals	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	N/A	5	1.33	1.99	0.911	1.25	0.595	0.864	0.332	1.24	0.925
Matrix Soil: Metals	Thallium	µg/g	0.4	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Matrix Soil: Metals	Uranium	µg/g	0.5	23	0.51	0.77	1.05	0.85	0.86	0.77	0.8	0.59	0.67
Matrix Soil: Metals	Vanadium	µg/g	0.4	86	15.1	25.3	31.7	27	26.4	31.4	16.6	29.3	30.1
Matrix Soil: Metals	Zinc	µg/g	5	340	77	84	74	96	81	62	238	72	53

Guideline Legend:	Exceeds Guideline
	Within Guideline
	Below RDL

AGAT Workorder					21T700748	21T700748	21T700748	21T700748	21T700748	21T703878	21T703878	21T703878	21T703878
Date Sampled					01/13/21	01/13/21	01/13/21	01/13/21	01/14/21	01/20/21	01/20/21	01/20/21	01/21/21
Sample Description					BH101-SS1	BH102-SS1	BH103-SS1	BH104-SS1	BH105-SS1	BH106-SS2	BH107-SS1	BH108-SS1	BH109-SS1
Package Name	**Parameter Name**	**Unit**	**RDL**	**ON T2 S RPI CT**	**1966584**	**1966586**	**1966588**	**1966589**	**1966590**	**2011445**	**2011446**	**2011447**	**2011448**
Matrix Soil: PAHs	1 and 2 Methlynaphthalene	µg/g	0.05	0.99	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Acenaphthene	µg/g	0.05	7.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Acenaphthene-d10	%			91	90	84	85	102	80	82	82	80
Matrix Soil: PAHs	Acenaphthylene	µg/g	0.05	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Anthracene	µg/g	0.05	0.67	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Benz(a)anthracene	µg/g	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Benzo(a)pyrene	µg/g	0.05	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Benzo(b)fluoranthene	µg/g	0.05	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Benzo(g,h,i)perylene	µg/g	0.05	6.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Benzo(k)fluoranthene	µg/g	0.05	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Chrysene	µg/g	0.05	7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Chrysene-d12	%			83	72	70	73	85	110	98	100	100
Matrix Soil: PAHs	Dibenz(a,h)anthracene	µg/g	0.05	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Fluoranthene	µg/g	0.05	0.69	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Fluorene	µg/g	0.05	62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Indeno(1,2,3-cd)pyrene	µg/g	0.05	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Moisture Content	%	0.1		16.6	13.4	7.2	8.5	10.9	13.1	11.6	9.8	10.9
Matrix Soil: PAHs	Naphthalene	µg/g	0.05	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Naphthalene-d8	%			84	96	96	79	115	91	80	77	86
Matrix Soil: PAHs	Phenanthrene	µg/g	0.05	6.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Pyrene	µg/g	0.05	78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Guideline Legend:	Exceeds Guideline
	Within Guideline
	Below RDL

AGAT Workorder					21T703878	21T703878	21T703878	21T703878	21T703878	21T703878	21T703878	21T703878	21T705007
Date Sampled					01/21/21	01/21/21	01/21/21	01/21/21	01/21/21	01/21/21	01/22/21	01/22/21	01/21/21
Sample Description					BH110-SS1	BH111-SS1	BH112-SS1	BH113-SS1	BH114-SS1	BH114-SS2	BH115-SS1	BH115-SS2	DUP011402
Package Name	**Parameter Name**	**Unit**	**RDL**	**ON T2 S RPI CT**	**2011449**	**2011451**	**2011452**	**2011454**	**2011456**	**2011457**	**2011458**	**2011459**	**2020967**
Matrix Soil: PAHs	1 and 2 Methlynaphthalene	µg/g	0.05	0.99	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Acenaphthene	µg/g	0.05	7.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Acenaphthene-d10	%			79	77	87	79	83	75	93	85	87
Matrix Soil: PAHs	Acenaphthylene	µg/g	0.05	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Anthracene	µg/g	0.05	0.67	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Benz(a)anthracene	µg/g	0.05	0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Benzo(a)pyrene	µg/g	0.05	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Benzo(b)fluoranthene	µg/g	0.05	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Benzo(g,h,i)perylene	µg/g	0.05	6.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Benzo(k)fluoranthene	µg/g	0.05	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Chrysene	µg/g	0.05	7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Chrysene-d12	%			119	110	116	110	110	100	100	100	82
Matrix Soil: PAHs	Dibenz(a,h)anthracene	µg/g	0.05	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Fluoranthene	µg/g	0.05	0.69	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Fluorene	µg/g	0.05	62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Indeno(1,2,3-cd)pyrene	µg/g	0.05	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Moisture Content	%	0.1		6.2	8.4	11	10.6	8.3	13.7	10.1	13.6	14.2
Matrix Soil: PAHs	Naphthalene	µg/g	0.05	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Naphthalene-d8	%			85	81	92	85	88	79	96	111	92
Matrix Soil: PAHs	Phenanthrene	µg/g	0.05	6.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: PAHs	Pyrene	µg/g	0.05	78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Guideline Legend:	Exceeds Guideline
	Within Guideline
	Below RDL

AGAT Workorder					21T700748	21T700748	21T700748	21T703878	21T703878	21T703878	21T703878	21T705007
Date Sampled					01/13/21	01/13/21	01/14/21	01/20/21	01/21/21	01/21/21	01/21/21	01/21/21
Sample Description					BH101-SS2	BH102-SS2	BH105-SS3	BH106-SS1	BH110-SS2	BH112-SS2	BH113-SS2	DUP011002
Package Name	**Parameter Name**	**Unit**	**RDL**	**ON T2 S RPI CT**	**1966585**	**1966587**	**1966591**	**2011444**	**2011450**	**2011453**	**2011455**	**2020966**
Matrix Soil: PHCs	F1 (C6 to C10)	µg/g	5	55	<5	<5	<5	<5	<5	<5	<5	<5
Matrix Soil: PHCs	F1 (C6 to C10) minus BTEX	µg/g	5	55	<5	<5	<5	<5	<5	<5	<5	<5
Matrix Soil: PHCs	F2 (C10 to C16)	µg/g	10	98	<10	<10	<10	<10	<10	<10	<10	<10
Matrix Soil: PHCs	F3 (C16 to C34)	µg/g	50	300	<50	<50	<50	<50	<50	<50	<50	<50
Matrix Soil: PHCs	F4 (C34 to C50)	µg/g	50	2800	<50	<50	<50	<50	<50	<50	<50	<50
Matrix Soil: PHCs	Gravimetric Heavy Hydrocarbons	µg/g	50	2800	NA	NA	NA	NA	NA	NA	NA	NA
Matrix Soil: PHCs	Moisture Content	%	0.1		16.9	12.8	10.9	11.9	12	11.1	11.6	12.3
Matrix Soil: PHCs	Terphenyl	%			77	72	94	86	82	79	87	115

Guideline Legend:	Exceeds Guideline
	Within Guideline
	Below RDL

AGAT Workorder					21T700748	21T700748	21T700748	21T703878	21T703878	21T703878	21T703878	21T705007
Date Sampled					01/13/21	01/13/21	01/14/21	01/20/21	01/21/21	01/21/21	01/21/21	01/21/21
Sample Description					BH101-SS2	BH102-SS2	BH105-SS3	BH106-SS1	BH110-SS2	BH112-SS2	BH113-SS2	DUP011002
Package Name	**Parameter Name**	**Unit**	**RDL**	**ON T2 S RPI CT**	**1966585**	**1966587**	**1966591**	**2011444**	**2011450**	**2011453**	**2011455**	**2020966**
Matrix Soil: VOCs	1,1,1,2-Tetrachloroethane	ug/g	0.04	0.058	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Matrix Soil: VOCs	1,1,1-Trichloroethane	ug/g	0.05	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	1,1,2-Trichloroethane	ug/g	0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Matrix Soil: VOCs	1,1-Dichloroethane	ug/g	0.02	0.47	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Matrix Soil: VOCs	1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	1,2-Dichlorobenzene	ug/g	0.05	1.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	1,2-Dichloroethane	ug/g	0.03	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Matrix Soil: VOCs	1,2-Dichloropropane	ug/g	0.03	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Matrix Soil: VOCs	1,3-Dichlorobenzene	ug/g	0.05	4.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	1,3-Dichloropropene (Cis + Trans)	µg/g	0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Matrix Soil: VOCs	1,4-Dichlorobenzene	ug/g	0.05	0.083	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	4-Bromofluorobenzene	% Recovery	1		81	81	80	92	90	91	91	85
Matrix Soil: VOCs	Acetone	ug/g	0.5	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Matrix Soil: VOCs	Benzene	ug/g	0.02	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Matrix Soil: VOCs	Bromodichloromethane	ug/g	0.05	1.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Bromoform	ug/g	0.05	0.27	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Chlorobenzene	ug/g	0.05	2.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Chloroform	ug/g	0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Matrix Soil: VOCs	Cis- 1,2-Dichloroethylene	ug/g	0.02	1.9	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Matrix Soil: VOCs	Dibromochloromethane	ug/g	0.05	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Dichlorodifluoromethane	µg/g	0.05	16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Ethylbenzene	ug/g	0.05	1.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Ethylene Dibromide	ug/g	0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Matrix Soil: VOCs	m & p-Xylene	ug/g	0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Methyl Ethyl Ketone	ug/g	0.5	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Matrix Soil: VOCs	Methyl Isobutyl Ketone	ug/g	0.5	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Matrix Soil: VOCs	Methyl tert-butyl Ether	ug/g	0.05	0.75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Methylene Chloride	ug/g	0.05	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Moisture Content	%	0.1		16.9	12.8	10.9	11.9	12	11.1	11.6	12.3
Matrix Soil: VOCs	n-Hexane	µg/g	0.05	2.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	o-Xylene	ug/g	0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Styrene	ug/g	0.05	0.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Tetrachloroethylene	ug/g	0.05	0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Toluene	ug/g	0.05	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Toluene-d8	% Recovery	1		110	108	103	106	105	104	102	104
Matrix Soil: VOCs	Trans- 1,2-Dichloroethylene	ug/g	0.05	0.084	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Trichloroethylene	ug/g	0.03	0.061	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Matrix Soil: VOCs	Trichlorofluoromethane	ug/g	0.05	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Matrix Soil: VOCs	Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Matrix Soil: VOCs	Xylenes (Total)	ug/g	0.05	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Guideline Legend:	Exceeds Guideline
	Within Guideline
	Below RDL

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

Sample Description				BH/MW104	BH/MW111	BH/MW112	BH/MW113	DUP11201
Date Sampled				02/03/2021	02/03/2021	02/03/2021	02/03/2021	02/03/2021
Parameter	Unit	G / S	RDL	2045871	2045897	2045899	2045902	2045928
Naphthalene	µg/L	11	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
Acenaphthene	µg/L	4.1	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
Phenanthrene	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	2.4	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
Pyrene	µg/L	4.1	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	1	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
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	3.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Naphthalene-d8	%		1	63.0	82.0	86.0	87.0	90.0
Acridine-d9	%		1	107	96.0	87.0	98.0	79.0
Terphenyl-d14	%		1	72.0	110	80.0	94.0	98.0
Sediment				No	No	No	No	No

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard

2045871-2045928

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto

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

Sample Description				BH/MW101	Trip Blank
Date Sampled				02/03/2021	02/03/2021
Parameter	Unit	G / S	RDL	2045847	2045935
Toluene-d8	% Recovery		1.00	99	91
F1 (C6 - C10)	µg/L	750	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA
Terphenyl	% Recovery			79	79
Sediment				Trace	No

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard

2045847

Sediment present in sample.
The C6-C10 fraction is calculated using Toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

2045935

The C6-C10 fraction is calculated using Toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto

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

Sample Description				BH/MW104	BH/MW112	DUP11201
Date Sampled				02/03/2021	02/03/2021	02/03/2021
Parameter	Unit	G / S	RDL	2045871	2045899	2045928
F1 (C6-C10)	µg/L	750	25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25
Toluene-d8	% Recovery		1.00	93	97	106
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA
Terphenyl	% Recovery			77	79	113
Sediment				No	No	No

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard

2045871-2045928

The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto

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

Sample Description				BH/MW101	BH/MW104	BH/MW112	DUP11201	Trip Blank
Date Sampled				02/03/2021	02/03/2021	02/03/2021	02/03/2021	02/03/2021
Parameter	Unit	G / S	RDL	2045847	2045871	2045899	2045928	2045935
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	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
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	5	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
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	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
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	5.0	0.20	0.22	0.22	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	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
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	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
Dibromochloromethane	µg/L	25	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	30	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
m & p-Xylene	µg/L		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
Styrene	µg/L	5.4	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
o-Xylene	µg/L		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
1,4-Dichlorobenzene	µg/L	1	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
1,3-Dichloropropene	µg/L	0.5	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
n-Hexane	µg/L	51	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene-d8	% Recovery		1	101	125	103	102	117
4-Bromofluorobenzene	% Recovery		1	87	88	84	88	88

Comments:

RDL - Reported Detection Limit; G / S - Guideline / Standard

2045847-2045935 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene. 1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto

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

Sample Description				**BH/MW101**	**BH/MW108**	**BH/MW112**	**DUP11201**	
Date Sampled				**02/03/2021**	**02/03/2021**	**02/03/2021**	**02/03/2021**	
Parameter	**Unit**	**G / S**	**RDL**	**2045847**	**2045888**	**2045899**	**2045928**	**RDL**
Dissolved Antimony	µg/L	6	1.0	<1.0	<1.0	<1.0	<1.0	1.0
Dissolved Arsenic	µg/L	25	1.0	<1.0	<1.0	<1.0	<1.0	1.0
Dissolved Barium	µg/L	1000	2.0	115	62.4	70.7	66.1	2.0
Dissolved Beryllium	µg/L	4	0.50	<0.50	<0.50	<0.50	<0.50	0.50
Dissolved Boron	µg/L	5000	10.0	351	590	746	773	10.0
Dissolved Cadmium	µg/L	2.7	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
Dissolved Cobalt	µg/L	3.8	0.50	0.57	1.65	<0.50	<0.50	0.50
Dissolved Copper	µg/L	87	1.0	10.1	1.5	1.1	<1.0	1.0
Dissolved Lead	µg/L	10	0.50	1.54	2.40	2.09	2.29	0.50
Dissolved Molybdenum	µg/L	70	0.50	1.90	0.81	0.76	1.38	0.50
Dissolved Nickel	µg/L	100	3.0	<3.0	<3.0	<3.0	<3.0	3.0
Dissolved Selenium	µg/L	10	1.0	2.1	2.1	2.5	3.4	1.0
Dissolved Silver	µg/L	1.5	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
Dissolved Uranium	µg/L	20	0.50	1.65	<0.50	<0.50	<0.50	0.50
Dissolved Vanadium	µg/L	6.2	0.40	<0.40	<0.40	<0.40	<0.40	0.40
Dissolved Zinc	µg/L	1100	5.0	<5.0	<5.0	<5.0	<5.0	5.0
Mercury	µg/L	0.29	0.02	<0.02	<0.02	<0.02	<0.02	0.02
Chromium VI	µg/L	25	2.000	<2.000	<2.000	<2.000	<2.000	2.000
Cyanide, Free	µg/L	66	2	<2	<2	<2	<2	2
Dissolved Sodium	µg/L	490000	500	**776000**	402000	475000	456000	1000
Chloride	µg/L	790000	5000	**1270000**	**1160000**	**1340000**	**1330000**	5000
Electrical Conductivity	uS/cm	NA	2	4630	4400	4790	4810	2
pH	pH Units		NA	7.66	7.49	7.52	7.56	NA

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

2045847-2045929 Metals analysis completed on a filtered sample.
Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto

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

Sample Description				**BH/MW103**	**BH/MW107**
Date Sampled				**02/03/2021**	**02/03/2021**
Parameter	**Unit**	**G / S**	**RDL**	**2045869**	**2045886**
Dissolved Sodium	µg/L	490000	500	**576000**	**566000**
Chloride	µg/L	790000	5000	**1640000**	**1560000**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
2045869-2045886 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto

Appendix C – Borehole Logs

RECORD OF BOREHOLE No. BH/MW101

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augering	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	13 Jan 21	Date Completed: 13 Jan 21	Revision No.: 1, 1/2/21

Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING Penetration Testing: ○ SPT ● DCPT MTO Vane*: △ Intact ▲ Remould Nilcon Vane*: ◇ Intact ◆ Remould * Undrained Shear Strength (kPa) 20 40 60 80	LAB TESTING ★ Rinse pH Values 2 4 6 8 10 12 Soil Vapour Reading △ parts per million (ppm) 100 200 300 400 ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 100 mm asphalt concrete over 200 mm granular base										
	FILL: clayey silt, trace sand, trace gravel, mottled, grey, moist, very stiff to hard (0.3)	SS	1	41	22			○ 22	○ 23		
		SS	2	100	60	1		○	○ 22		
	CLAYEY SILT TILL: trace sand, trace gravel, fragments of Shale, grey, moist, hard (1.1)	SS	3	93	71	2		○	○ 10		
	BEDROCK: Shale, highly weathered, occasional limestone seams, grey, damp, hard (2.3)	SS	4	53	50/15			○ 50/15	○ 18		
	-first water strike	SS	5	63	50/8	3		○ 50/8	○ 6		
		SS	6	100	50/3	4		○ 50/3	○ 4		
		SS	7	100	50/3	5		○ 50/3	○ 4		
	End of Borehole (6.1)					6					

Notes:
1. Borehole open upon completion of drilling.
2. Groundwater level at 5.18 m bgs measured upon completion of drilling.

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▽ Groundwater depth on completion of drilling: 5.18 m.

RECORD OF BOREHOLE No. BH/MW102

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augering	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	13 Jan 21	Date Completed: 13 Jan 21	Revision No.: 1, 1/2/21

Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING Penetration Testing: ○ SPT ● DCPT; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80	LAB TESTING ★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L; Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 100 mm asphalt concrete over 200 mm granular base	SS	1	90	50/15			50	19		
	FILL: sandy silt, some clay, mottled, brown/grey, very moist, compact 0.3							15			
	CLAYEY SILT TILL: trace sand, trace sand, trace gravel, fragments of Shale, grey, moist, very stiff to hard 0.8 - sand seam, 100 mm thick	SS	2	46	24	1		○	16		
		SS	3	90	50/15			50 15	13		
		SS	4	100	50/13	2		50 13	7		
	BEDROCK: Shale, highly weathered, occasional limestone fragments, grey, damp, hard 2.6	SS	5	100	50/3	3		50 3	6		
	-first water strike	SS	6	63	50/8	4		50 8	6		
		SS	7	60	50/5	5 ▽		50 5	6		
	End of Borehole 6.2					6					

Notes:
1. Borehole open upon completion of drilling.
2. Groundwater level at 5.18 m bgs measured upon completion of drilling.

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▽ Groundwater depth on completion of drilling: 5.18 m.

RECORD OF BOREHOLE No. BH/MW103

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augering	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	13 Jan 21	Date Completed: 13 Jan 21	Revision No.: 1, 1/2/21

Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING Penetration Testing: ○ SPT ● DCPT MTO Vane*: △ Intact ▲ Remould Nilcon Vane*: ◇ Intact ◆ Remould * Undrained Shear Strength (kPa) 20 40 60 80	LAB TESTING ★ Rinse pH Values 2 4 6 8 10 12 Soil Vapour Reading △ parts per million (ppm) 100 200 300 400 ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 100 mm asphalt concrete over 300 mm granular bases	SS	1	51	13			○ 13			
	FILL: sand and gravel, brown, moist, compact 0.4 **CLAYEY SILT TILL:** some sand, trace gravel, fragments of Shale, reddish brown, moist, very stiff to hard 0.5	SS	2	84	26	1		○	○ 15		
		SS	3	93	70			○	○ 11		
	BEDROCK: Shale, highly weathered, occasional limestone fragments, grey, damp, hard 2.3	SS	4	87	50/15	2		50 ○ 15	○ 6		
		SS	5	100	50/5	3		50 ○ 5	○ 2		
		SS	6	60	50/5	4	▽	50 ○ 5	○ 4		
	Borehole terminated at 5.49 m due to auger refussal on inferred Limestone bedrock 5.5 Notes: 1. Borehole open upon completion of drilling. 2. Groundwater level at 4.57 m bgs measured upon completion of drilling.					5					

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▽ Groundwater depth on completion of drilling: 4.57 m.

RECORD OF BOREHOLE No. BH/MW104

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augering	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	13 Jan 21	Date Completed: 13 Jan 21	Revision No.: 1, 1/2/21

Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)
	ASPHALT: 100 mm asphalt concrete over 200 mm granular bases						
	FILL: sand and gravel, brown, moist, compact 0.3	SS	1	62	23		
	------- sandy silt, some clay, trace gravel	SS	2	62	13	1	
	CLAYEY SILT TILL: some sand, trace gravel, fragments of Shale, brown, moist, hard 1.4	SS	3	95	42	2	
	BEDROCK: Shale, highly weathered, occasional Limestone fragments, grey, moist, hard 2.3	SS	4	63	50/8		
		SS	5	100	50/3	3	
		SS	6	100	50/5	4	
		SS	7	100	50/3	5	
	End of Borehole 6.1					6	

Notes:
1. Borehole open upon completion of drilling.
2. Groundwater level at 4.88 m bgs measured upon completion of drilling.

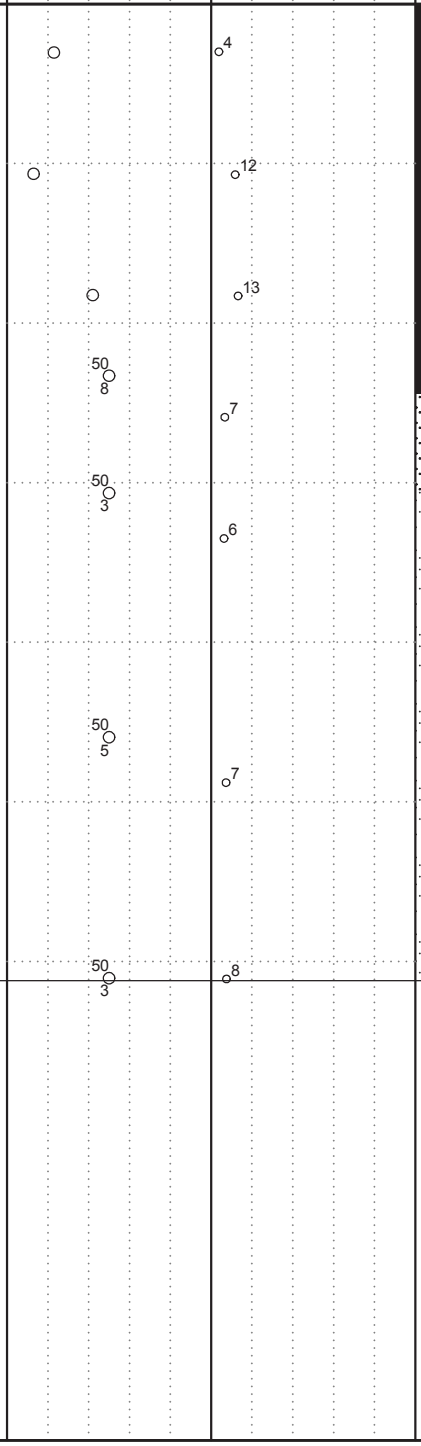
FIELD TESTING

Penetration Testing: ○ SPT ● DCPT

MTO Vane*: △ Intact ▲ Remould

Nilcon Vane*: ◇ Intact ◆ Remould

* Undrained Shear Strength (kPa): 20 40 60 80



LAB TESTING

★ Rinse pH Values: 2 4 6 8 10 12

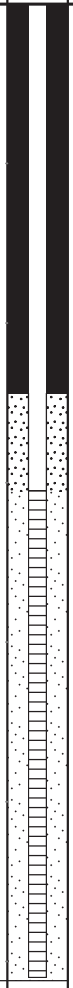
Soil Vapour Reading: △ parts per million (ppm): 100 200 300 400

▲ Lower Explosive Limit (LEL)

W_P W W_L

Plastic Liquid: 20 40 60 80

INSTRUMENTATION INSTALLATION



COMMENTS

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▽ Groundwater depth on completion of drilling: 4.88 m.

Scale: 1 : 47

RECORD OF BOREHOLE No. BH/MW105

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Hollow Stem Augering + Rock Coring	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	14 Jan 21	Date Completed: 15 Jan 21	Revision No.: 1, 1/2/21

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	Penetration Testing: SPT ○ DCPT ●; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80	★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L; Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 100 mm asphalt concrete over 200 mm granular base										
	FILL: clayey silt, trace to some sand and gravel, brown/grey, moist, hard to very stiff (0.3)	SS	1	62	37			○ 50	○ 6		
	CLAYEY SILT TILL: trace sand, trace gravel, fragments of Shale, grey, moist, very stiff to hard (1.1)	SS	2	70	23	1		○	○ 14		
		SS	3	84	55	2		○	○ 9		
	BEDROCK: Shale, highly weathered to excellent qaulity, occasional Limestone layers, grey, moist (2.3)	SS	4	100	50/8			○ 50/8	○ 7		
		SS	5	100	50/5	3		○ 50/5	○ 7		
	-first water strike	SS	6	100	50/5	4		○ 50/5	○ 18		
		SS	7	100	50/5	6		○ 50/5	○ 16		
		SS	8	100	50/5	7		○ 50/5	○ 16		
	ROCK CORE BEGINS - Poor Quality	RC	1	78	27	8		○			
						9					

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▽ No freestanding groundwater measured in open borehole on completion of drilling. ■ Cave in depth recorded on completion of drilling: Not Measured m.

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RECORD OF BOREHOLE No. BH/MW105

Project Number: **BIGC-ENV-349B** Drilling Location: **See BH Location Plan** Logged by: **TVH**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING: Penetration Testing (○ SPT ● DCPT; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80)	LAB TESTING: ★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	- Good Quality **BEDROCK:** Shale, highly weathered to excellent qaulity, occasional Limestone layers, grey, moist	RC	2	100	81						
	- Good Quality	RC	3	99	82	10		○			
	- Excellent Quality	RC	4	99	91	11		○			
	- Excellent Quality	RC	5	99	97	12		○			
	- Excellent Quality	RC	6	99	96	13		○			
	- Excellent Quality	RC	7	99	95	14		○			
	- Excellent Quality	RC	8	97	98	15		○			
						16					
						17					
						18					
						19					

Scale: 1 : 47

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RECORD OF BOREHOLE No. BH/MW105

Project Number: **BIGC-ENV-349B** Drilling Location: **See BH Location Plan** Logged by: **TVH**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
	BEDROCK: Shale, highly weathered to excellent qaulity, occasional Limestone layers, grey, moist							Penetration Testing: ○ SPT ● DCPT; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80	★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80		
	- Good Quality	RC	9	98	83	20		○			
	- Excellent Quality	RC	10	99	93	21		○			
	- Excellent Quality	RC	11	99	92	22		○			
	Borehole terminated at 23.42 23.4					23					
	Notes: 1. Borehole open upon completion of drilling. 2. Groundwater level not measured upon completion of drilling due to introduced drilling water										

Scale: 1 : 47

RECORD OF BOREHOLE No. BH/MW106

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	20 Jan 21	Date Completed: 20 Jan 21	Revision No.: 1, 1/2/21

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	Penetration Testing: ○ SPT ● DCPT; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80	★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L; Plastic 20 40 60 80 Liquid	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 75 mm asphalt concrete over 150 mm granular base										
	FILL: clayey silt, trace sand, trace gravel, rootlets, mottled, brown, moist, stiff to hard 0.2	SS	1	92	12			○ 50	○ 14		
		SS	2	95	63/23	1		○ 63 ○ 23	○ 14		
	CLAYEY SILT TILL: trace sand, trace gravel, fragments of Shale, brown, moist, hard 1.1	SS	3	93	50/15			○ 50 ○ 15	○ 15		
	BEDROCK: Shale, highly weathered, occasional Limestone fragments, grey, damp, hard 1.7	SS	4	100	50/5	2		○ 50 ○ 5	○ 6		
		SS	5	100	50/5	3		○ 50 ○ 5	○ 6		
	-first water strike					4 ▽					
		SS	6	100	50/3	5		○ 50 ○ 3	○ 3		
		SS	7	100	50/3	6		○ 50 ○ 3	○ 2		
	End of Borehole 6.1										

Notes:
1. Borehole open upon completion of drilling.
2. Groundwater level at 4.88 m bgs measured upon completion of drilling.

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▽ Groundwater depth on completion of drilling: 3.96 m.

RECORD OF BOREHOLE No. BH/MW107

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	20 Jan 21	Date Completed: 20 Jan 21	Revision No.: 1, 1/2/21

Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING: Penetration Testing (○ SPT ● DCPT); MTO Vane* (△ Intact ▲ Remould); Nilcon Vane* (◇ Intact ◆ Remould); * Undrained Shear Strength (kPa) 20 40 60 80	LAB TESTING: ★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 120 mm asphalt concrete over 170 mm granular base										
	FILL: clayey silt, trace gravel, rootlets, mottled, brown, moist, stiff 0.3	SS	1	59	12			○ 50	○ 16		
	CLAYEY SILT TILL: trace sand, trace gravel, oxidized fissures, mottled, brownish grey, moist, very stiff to hard 0.8	SS	2	92	28	1		○	○ 12		
	BEDROCK: Shale, highly weathered, occasional Limestone fragments, grey, damp to moist, hard 1.8	SS	3	70	51	2		○	○ 11		
		SS	4	100	50/5			50 ○ 5	○ 8		
		SS	5	60	50/5	3		50 ○ 5	○ 6		
	-first water strike						▽				
		SS	6	100	50/5	4		50 ○ 5	○ 23		
						5					
		SS	7	100	50/3	6		50 ○ 3	○ 23		
	End of Borehole 6.1										

Notes:
1. Borehole open upon completion of drilling.
2. Groundwater level at 3.66 m bgs measured upon completion of drilling.

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▽ Groundwater depth on completion of drilling: 3.66 m.

RECORD OF BOREHOLE No. BH/MW108

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	20 Jan 21	Date Completed: 20 Jan 21	Revision No.: 1, 1/2/21

Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING Penetration Testing: ○ SPT ● DCPT MTO Vane*: △ Intact ▲ Remould Nilcon Vane*: ◇ Intact ◆ Remould * Undrained Shear Strength (kPa) 20 40 60 80	LAB TESTING ★ Rinse pH Values 2 4 6 8 10 12 Soil Vapour Reading: △ parts per million (ppm) 100 200 300 400 ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 150 mm asphalt concrete over 200 mm granular base	SS	1	75	9			○ 15			
	FILL: clayey silt, trace gravel, rootlets, organic staining, mottled, brown, moist, stiff 0.4										
	CLAYEY SILT TILL: trace sand, trace gravel, oxidized fissures, mottled, brown, moist, very stiff to hard 0.8	SS	2	100	25	1		○	○ 12		
		SS	3	100	65	2		○	○ 11		
	BEDROCK: Shale, highly weathered, occasional Limestone fragments, grey, moist 2.1	SS	4	100	50/5			50/5 ○	○ 8		
		SS	5	100	50/5	3		50/5 ○	○ 6		
	-first water strike					4 ▽					
		SS	6	100	50/3			50/3 ○	○ 5		
						5					
		SS	7	100	50/3	6		50/3 ○	○ 21		
	End of Borehole 6.1										

Notes:
1. Borehole open upon completion of drilling.
2. Groundwater level at 3.96 m bgs measured upon completion of drilling.

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▽ Groundwater depth on completion of drilling: 3.96 m.

RECORD OF BOREHOLE No. BH/MW109

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	20 Jan 21	Date Completed: 20 Jan 21	Revision No.: 1, 1/2/21

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	Penetration Testing: SPT ○ DCPT ●; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80	★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L; Plastic 20 40 60 80 Liquid	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 140 mm asphalt concrete over 160 mm granular base										
	FILL: clayey silt, trace gravel, rootlets, mottled, brown, moist, stiff 0.3 0.5	SS	1	92	13			○ 14			
	CLAYEY SILT TILL: trace sand, trace gravel, fragments of Shale, oxidized fissures, mottled, brownish grey, moist, hard	SS	2	100	33	1		○ 11			
		SS	3	83	76/20			76 ○ 20	○ 10		
	BEDROCK: Shale, highly weathered, occasional Limestone fragments, grey, moist to damp, hard 1.8					2					
		SS	4	100	50/5			50 ○ 5	○ 8		
		SS	5	100	50/3	3		50 ○ 3	○ 6		
	-first water strike					4					
		SS	6	100	50/5			50 ○ 5	○ 4		
						5	▽				
		SS	7	100	50/3	6		50 ○ 3	○ 30		
	End of Borehole 6.1										
	Notes: 1. Borehole open upon completion of drilling. 2. Groundwater level at 5.18 m bgs measured upon completion of drilling.										

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▽ Groundwater depth on completion of drilling: 5.18 m.

RECORD OF BOREHOLE No. BH/MW110

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	21 Jan 21	Date Completed: 21 Jan 21	Revision No.: 1, 1/2/21

Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING Penetration Testing: ○ SPT ● DCPT MTO Vane*: △ Intact ▲ Remould Nilcon Vane*: ◇ Intact ◆ Remould * Undrained Shear Strength (kPa) 20 40 60 80	LAB TESTING ★ Rinse pH Values 2 4 6 8 10 12 Soil Vapour Reading △ parts per million (ppm) 100 200 300 400 ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 120 mm asphalt concrete over 300 mm granular base	SS	1	79	21			○ 12			
	FILL: sandy silt, some gravel, occasional glass fragments, rootlets, brown, moist, compact 0.4										
	CLAYEY SILT TILL: trace sand, trace gravel, fragments of Shale, oxidized fissures, mottled, brownish grey, moist, stiff to hard 1.1	SS	2	95	12	1		○	○ 12		
		SS	3	100	37	2		○	○ 10		
	BEDROCK: Shale, highly weathered, occasional Limestone fragments, grey, damp, hard 2.3	SS	4	100	50/5			50/5 ○	○ 7		
		SS	5	100	50/5	3		50/5 ○	○ 3		
	-first water strike	SS	6	60	50/5	4 ▽		50/5 ○	○ 7		
		SS	7	100	50/3	5		50/3 ○	○ 17		
	End of Borehole 6.1					6					

Notes:
1. Borehole open upon completion of drilling.
2. Groundwater level at 3.96 m bgs measured upon completion of drilling.

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▽ Groundwater depth on completion of drilling: 3.96 m.

RECORD OF BOREHOLE No. BH/MW111

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	21 Jan 21	Date Completed: 21 Jan 21	Revision No.: 1, 1/2/21

Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 75 mm asphalt concrete over 250 mm granular base										
	FILL: sandy silt, trace gravel, rootlets, organic staining, brown, moist, compact 0.2	SS	1	95	15						
	------- clayey silt, firm	SS	2	100	8	1					
	CLAYEY SILT TILL: trace sand, trace gravel, fragments of Shale, oxidized fissures, mottled, grey, moist, hard 1.7	SS	3	100	34	2					
	BEDROCK: Shale, highly weathered, occasional Limestone fragments, grey, moist 2.3	SS	4	63	50/8						
		SS	5	100	50/5	3					
	-first water strike					4	▽				
		SS	6	60	50/5						
						5					
		SS	7	100	50/3	6					
	End of Borehole 6.1										

Penetration Testing: ○ SPT ● DCPT; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80

Rinse pH Values ★ 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80

Notes:
1. Borehole open upon completion of drilling.
2. Groundwater level at 3.96 m bgs measured upon completion of drilling.

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▽ Groundwater depth on completion of drilling: 3.96 m.

RECORD OF BOREHOLE No. BH/MW112

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	21 Jan 21	Date Completed: 21 Jan 21	Revision No.: 1, 1/2/21

Geodetic Ground Surface Elevation:	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)
	TOPSOIL: 150 mm						
	FILL: clayey silt, trace gravel, rootlets, brown, moist, stiff 0.2	SS	1	59	9		
	------- grey						
	CLAYEY SILT TILL: trace sand, trace gravel, fragments of Shale, oxidized fissures, mottled, grey, moist, very stiffto hard 1.1	SS	2	100	21	1	
		SS	3	95	44	2	
		SS	4	100	75/25		
	BEDROCK: Shale, highly weathered, occasional Limestone fragments, grey, moist, hard 2.6	SS	5	100	50/5	3	
	-first water strike	SS	6	60	50/5	4	
						5	
	End of Borehole 6.1	SS	7	100	50/3	6	

Notes:
1. Borehole open upon completion of drilling.
2. Groundwater level at 5.18 m bgs measured upon completion of drilling.

FIELD TESTING

Penetration Testing: ○ SPT ● DCPT

MTO Vane*: △ Intact ▲ Remould

Nilcon Vane*: ◇ Intact ◆ Remould

* Undrained Shear Strength (kPa): 20 40 60 80

SPT 'N' values: 9; 21; 44; 75/25; 50/5; 50/5; 50/3

LAB TESTING

★ Rinse pH Values: 2 4 6 8 10 12

Soil Vapour Reading: △ parts per million (ppm): 100 200 300 400

▲ Lower Explosive Limit (LEL)

W_P W W_L

Plastic Liquid: 20 40 60 80

Moisture values: 13; 15; 13; 5; 7; 8; 7

INSTRUMENTATION INSTALLATION

COMMENTS

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▽ Groundwater depth on completion of drilling: 5.18 m.

RECORD OF BOREHOLE No. BH/MW113

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	21 Jan 21	Date Completed: 21 Jan 21	Revision No.: 1, 1/2/21

Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING Penetration Testing: ○ SPT ● DCPT MTO Vane*: △ Intact ▲ Remould Nilcon Vane*: ◇ Intact ◆ Remould * Undrained Shear Strength (kPa) 20 40 60 80	LAB TESTING ★ Rinse pH Values 2 4 6 8 10 12 Soil Vapour Reading △ parts per million (ppm) 100 200 300 400 ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	GRAVEL: 50 mm 0.1										
	FILL: clayey silt, trace gravel, rootlets, organic staining, brown, moist, very stiff to stiff	SS	1	100	19			○ 19	○ 14		
		SS	2	100	13	1		○ 13	○ 12		
	CLAYEY SILT TILL: trace sand, trace gravel, fragments of Shale, oxidized fissures, mottled, grey, moist, stiff to hard 1.1	SS	3	100	44	2		○ 44	○ 11		
		SS	4	100	90			○ 90	○ 13		
	BEDROCK: Shale, highly weathered, occasional Limestone fragments, grey, moist 2.6	SS	5	100	50/5	3		○ 50/5	○ 5		
	-first water strike	SS	6	100	50/3	4 5		○ 50/3	○ 7		
	End of Borehole 6.1	SS	7	100	50/5	6		○ 50/5	○ 21		

Notes:
1. Borehole open upon completion of drilling.
2. Groundwater level at 5.48 m bgs measured upon completion of drilling.

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▽ Groundwater depth on completion of drilling: 5.48 m.

RECORD OF BOREHOLE No. BH/MW114

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Hollow Stem Augering + Rock Coring	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	21 Jan 21	Date Completed: 27 Jan 21	Revision No.: 1, 1/2/21

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	Penetration Testing: ○ SPT ● DCPT; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80	★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	TOPSOIL: 150 mm										
	FILL: clayey silt, trace gravel, mottled, grey, moist, very stiff to firm 0.2	SS	1	100	20			○	11		
		SS	2	100	8	1		○	19		
	CLAYEY SILT TILL: trace sand, trace gravel, frgments of Shalr, oxidized fissures, mottled, grey, moist, hard 1.7	SS	3	100	37	2		○	11		
		SS	4	100	57			○	11		
	BEDROCK: Shale, highly weathered to excellen 2.8 qaulity, occasional Limestone layers, grey, moist to damp	SS	5	100	50/5	3		50 ○ 5	9		
	- first water strike	SS	6	60	50/5	4		50 ○ 5	7		
		SS	7	60	50/5	5					
	ROCK CORE BEGINS - Poor Quality	RC	1	98	35	6		50 ○ 5	19		
						7					
	- Poor Quality	RC	2	69	28	8		○			
						9					

B.I.G. Consulting Inc.
12-5500 Tomken Rd.
Mississauga, ON L4W 2Z4
Canada
T: 416-214-4880
F: 416-551-2633

▽ No freestanding groundwater measured in open borehole on completion of drilling. ■ Cave in depth recorded on completion of drilling: Not Measured m.

Scale: 1 : 47

Continued on Next Page

RECORD OF BOREHOLE No. BH/MW114

Project Number: **BIGC-ENV-349B** Drilling Location: **See BH Location Plan** Logged by: **TVH**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	Penetration Testing: ○ SPT ● DCPT; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80	★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	BEDROCK: Shale, highly weathered to excellent qaulity, occasional Limestone layers, grey, moist to damp										
	- Fair Quality	RC	3	98	62						
	- Good Quality	RC	4	100	87						
	- Good Quality	RC	5	100	76						
	- Good Quality	RC	6	100	83						
	- Excellent Quality	RC	7	100	98						
	- Good Quality	RC	8	97	89						

10 11 12 13 14 15 16 17 18 19

Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and requires interpretative assistance from a qualified Geotechnical Engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commisioned and the accompanying'Notes to Record of Boreholes'.

Scale: 1 : 47

Continued on Next Page

RECORD OF BOREHOLE No. BH/MW114

Project Number: **BIGC-ENV-349B** Drilling Location: **See BH Location Plan** Logged by: **TVH**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	Penetration Testing: ○ SPT ● DCPT; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80	★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	BEDROCK: Shale, highly weathered to excellent qaulity, occasional Limestone layers, grey, moist to damp - Excellent Quality	RC	9	100	94	20		○			
	- Excellent Quality	RC	10	100	90	21		○			
	- Excellent Quality	RC	11	100	97	22 23		○			
	Borehole terminated at 23.32 23.3 Notes: 1. Borehole open upon completion of drilling. 2. Groundwater level not measured upon completion of drilling due to introduced drilling water										

Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and requires interpretative assistance from a qualified Geotechnical Engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commisioned and the accompanying'Notes to Record of Boreholes'.

Scale: 1 : 47

RECORD OF BOREHOLE No. BH/MW115

Project Number:	BIGC-ENV-349B	Drilling Location:	See BH Location Plan	Logged by:	TVH
Project Client:	Distrikt Capital	Drilling Method:	150 mm Hollow Stem Augering + Rock Coring	Compiled by:	TVH
Project Name:	BIGC-ENV-349B	Drilling Machine:	Truck Mounted Drill Rig	Reviewed by:	SS
Project Location:	217 & 227 Cross Ave. and 571 Argus Rd., Oakville, ON	Date Started:	22 Jan 21	Date Completed: 26 Jan 21	Revision No.: 1, 1/2/21

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation:	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	PenetrationTesting: SPT ○ DCPT ●; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80	★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L; Plastic Liquid 20 40 60 80	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 100 mm asphalt concrete over 300 mm granular bases	SS	1	59	16			○ 15			
	FILL: clayey silt, trace gravel, rootlets, organic staining, dark brown, moist, very stiff 0.4										
	CLAYEY SILT TILL: trace sand. trace gravel, oxidized fissures, mottled, grey, moist, stiff to hard 0.8	SS	2	100	12	1		○	○ 13		
		SS	3	84	32	2		○	○ 12		
		SS	4	100	50/13			50 ○ 13	○ 10		
	BEDROCK: Shale, highly weathered to excellent qaulity, occasional Limestone layers, grey, moist to damp 2.4	SS	5	100	50/5	3		50 ○ 5	○ 6		
	- first water strike					4					
		SS	6	60	50/5			50 ○ 5	○ 5		
						5					
		SS	7	60	50/5	6		50 ○ 5	○ 5		
	ROCK CORE BEGINS - Poor Quality	RC	1	83	30	7					
						8		○			
	- Fair Quality	RC	2	98	74	9		○			

Continued on Next Page

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12-5500 Tomken Rd.
Mississauga, ON L4W 2Z4
Canada
T: 416-214-4880
F: 416-551-2633

▽ No freestanding groundwater measured in open borehole on completion of drilling. ■ Cave in depth recorded on completion of drilling: Not Measured m.

Scale: 1 : 47

RECORD OF BOREHOLE No. BH/MW115

Project Number: **BIGC-ENV-349B** Drilling Location: **See BH Location Plan** Logged by: **TVH**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
	BEDROCK: Shale, highly weathered to excellent qaulity, occasional Limestone layers, grey, moist to damp										
	- Fair Quality	RC	3	99	61	10					
	- Good Quality	RC	4	99	77	11					
	- Excellent Quality	RC	5	100	98	12					
	- Good Quality	RC	6	98	87	13					
	- Excellent Quality	RC	7	100	95	14					
	- Excellent Quality	RC	8	100	92	15					
						16					
						17					
						18					
						19					

FIELD TESTING: Penetration Testing — ○ SPT ● DCPT; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80

LAB TESTING: ★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80

Scale: 1 : 47

Continued on Next Page

RECORD OF BOREHOLE No. BH/MW115

Project Number: **BIGC-ENV-349B** Drilling Location: **See BH Location Plan** Logged by: **TVH**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
	BEDROCK: Shale, highly weathered to excellent qaulity, occasional Limestone layers, grey, moist to damp - Excellent Quality	RC	9	100	91	20					
	- Good Quality	RC	10	96	89	21					
	- Excellent Quality	RC	11	100	92	22 23					
	Borehole terminated at 23.32 23.3 Notes: 1. Borehole open upon completion of drilling. 2. Groundwater level not measured upon completion of drilling due to introduced drilling water										

FIELD TESTING: Penetration Testing — ○ SPT ● DCPT; MTO Vane* △ Intact ▲ Remould; Nilcon Vane* ◇ Intact ◆ Remould; * Undrained Shear Strength (kPa) 20 40 60 80

LAB TESTING: ★ Rinse pH Values 2 4 6 8 10 12; Soil Vapour Reading △ parts per million (ppm) 100 200 300 400; ▲ Lower Explosive Limit (LEL) W_P W W_L Plastic Liquid 20 40 60 80

Appendix D – Conceptual Site Models

Figure D.1. - Human Health Conceptual On-Site Model

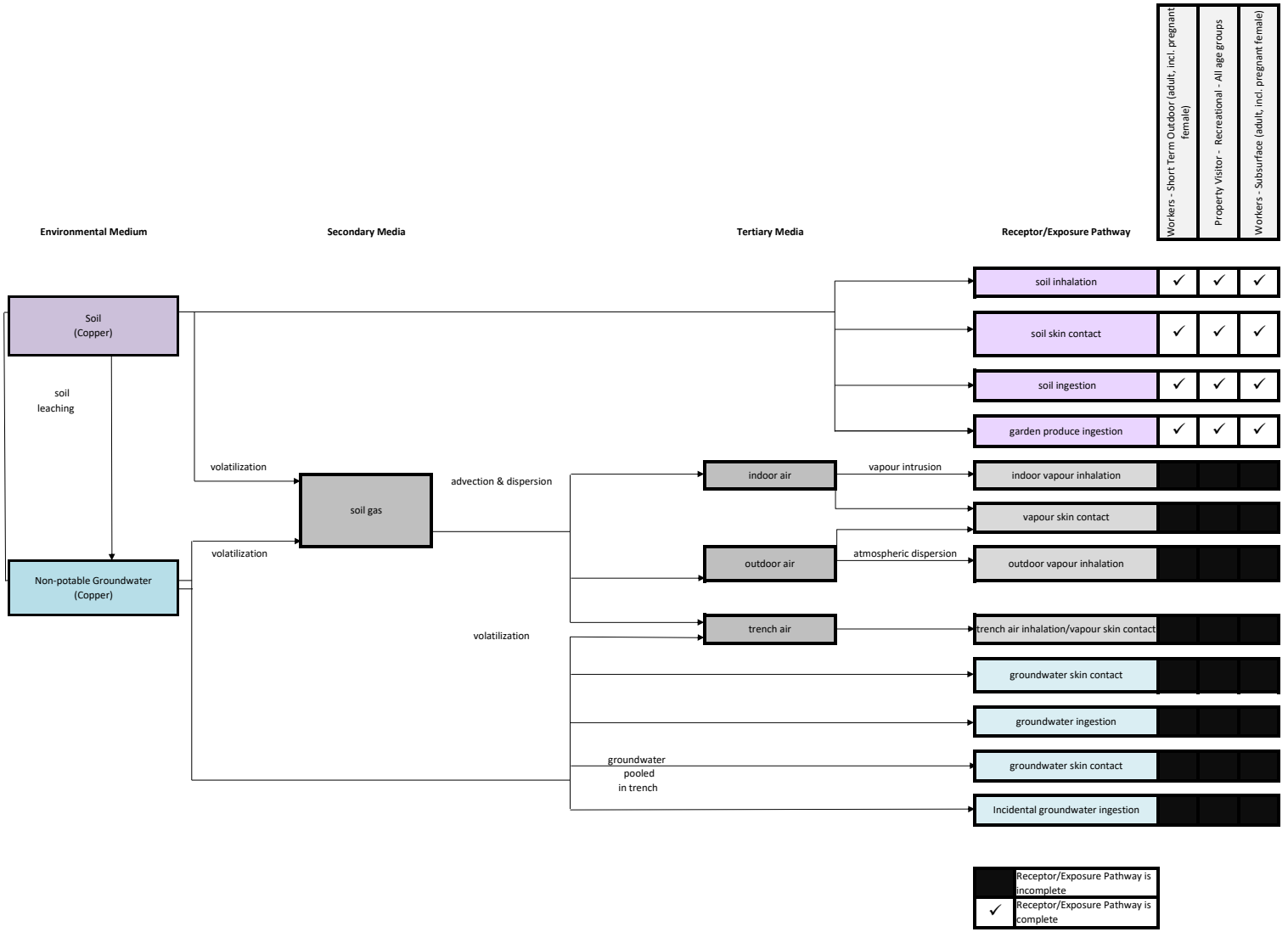
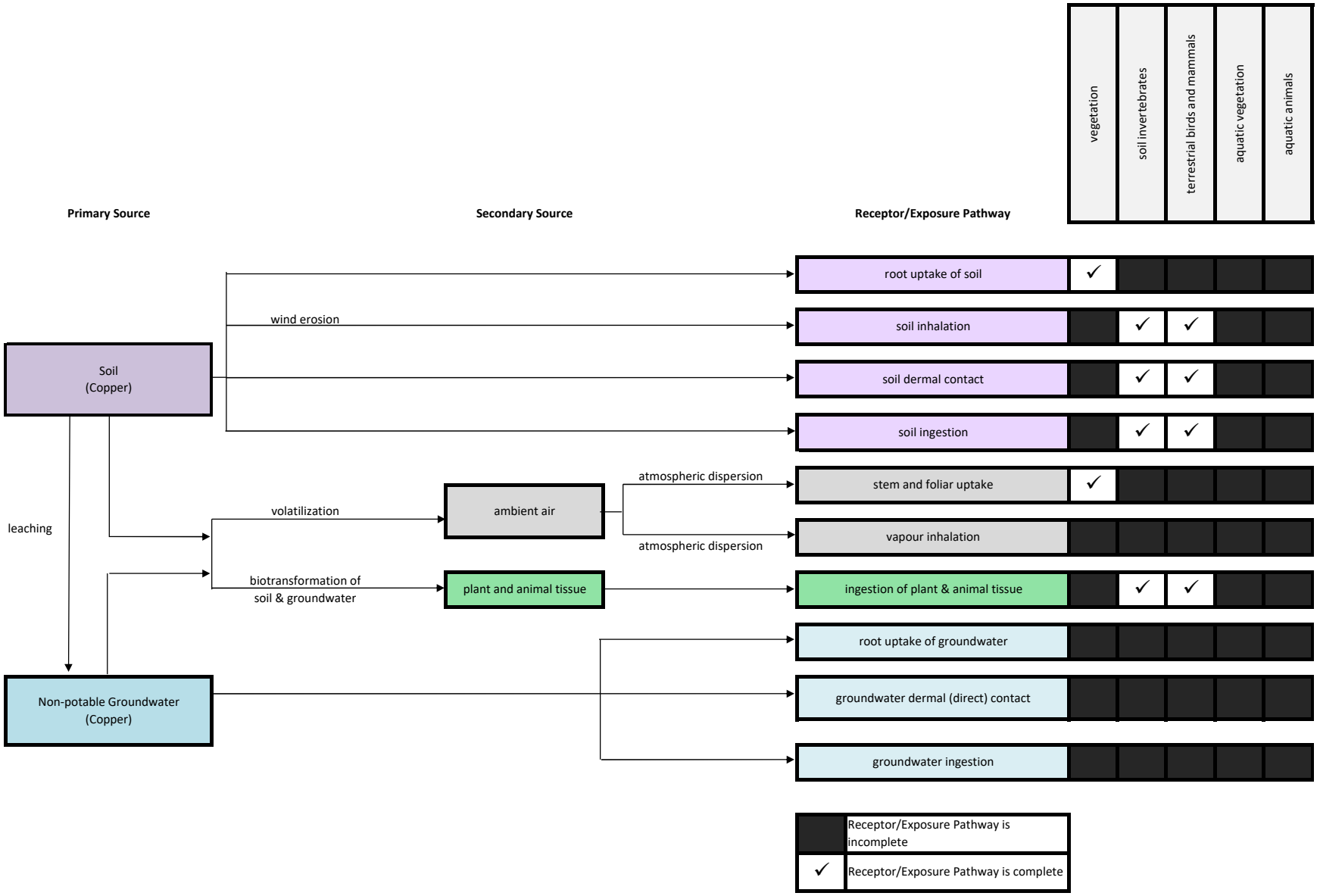
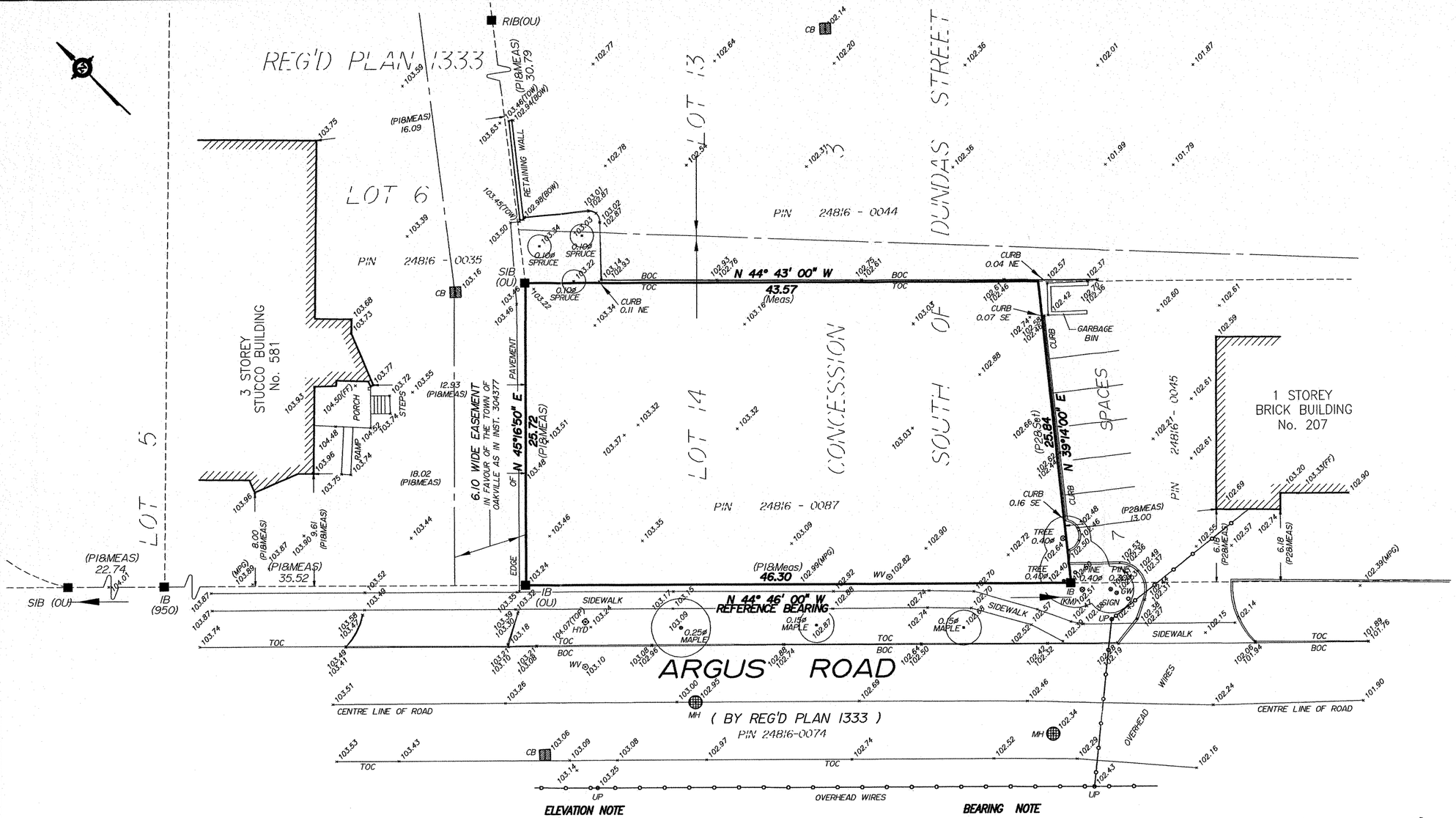


Figure D.2 - Ecological Conceptual On-Site Model



Appendix E - Survey Plan



TOPOGRAPHIC SURVEY OF

PART OF LOT 14
CONCESSION 3
SOUTH OF DUNDAS STREET
TOWN OF OAKVILLE
REGIONAL MUNICIPALITY OF HALTON

0 5 10 15 metres

SCALE 1 : 300

david horwood limited ontario land surveyors 2006

METRIC

Distances shown on this plan are in metres and can be converted to feet dividing by 0.3048.

LEGEND

■	Survey Monument Found
□	Survey Monument Set
SIB	Standard Iron Bar
IB	Iron Bar
RIB	Round Iron Bar
OU	Origin Unknown
P1	Plan of Survey by David Horwood Ltd., O.L.S. dated December 31, 2001.
P2	Plan of Survey by David Horwood Ltd., O.L.S. dated March 15, 2006.
MH	Maintenance Hole
TOC	Top of Curb
ø	Diameter
CB	Catch Basin
BOC	Bottom of Curb
FF	Finished Floor Elevation
MPG	Midpoint Grade
UP	Utility Pole
WV	Water Valve
GW	Guy Wire
950	F. G. Cunningham, O.L.S.
KM	K. H. McConnell, O.L.S.

ELEVATION NOTE

Elevations are geodetic and are related to Town of Oakville benchmark N° 110 having an elevation of 107.17 m. above sea level.

BEARING NOTE

Bearings are astronomic, and are referred to the Northeasterly limit of Argus Road as shown on Registered Plan 1333 having a N 44° 46' 00" W.

Topographic Survey completed on October 10, 2006.

Oct 25/06
Date

Project No. 5765

David Horwood, O.L.S.

5765\topo\5765-1.dwg

3960 14th avenue, unit 17 markham, ontario L3R 0B1
Bus: (906) 475-7265 Fax: (905) 475-1277 e-mail: markham@dhlsurveyors.com
markham
david horwood limited
ontario land surveyor canada lands surveyor
oakville
131 trafalgar road, 2nd floor oakville, ontario L6J 3G4
Bus: (905) 815-1404 Fax: (905) 815-1532 e-mail: oakville@dhlsurveyors.com

TOPOGRAPHIC SURVEY OF
PART OF LOTS 13 AND 14
CONCESSION 3,
SOUUTH OF DUNDAS STREET

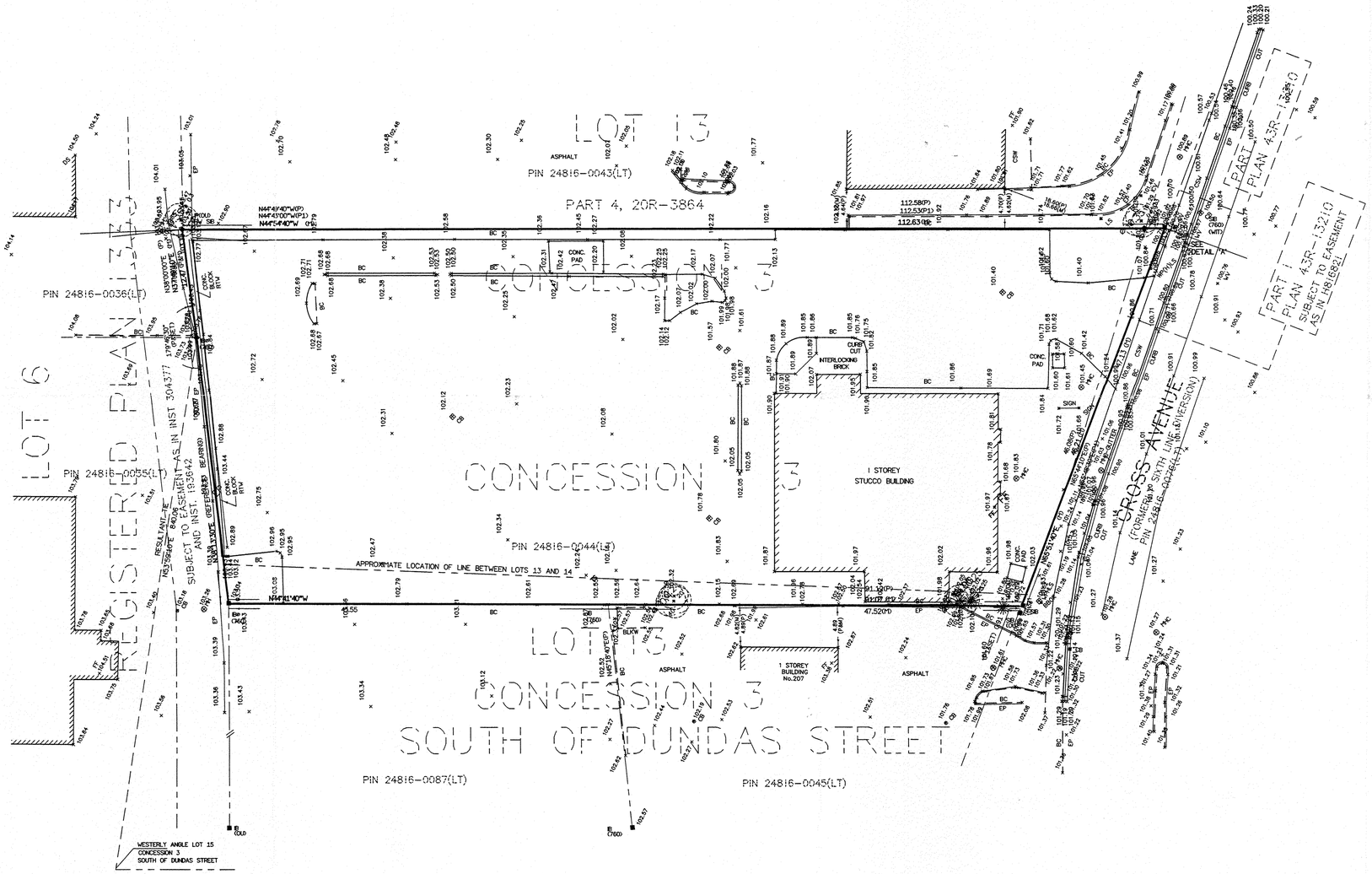
FORMERLY TOWNSHIP OF TRAFALGAR, COUNTY OF HALTON
NOW IN THE TOWN OF OAKVILLE
REGIONAL MUNICIPALITY OF HALTON

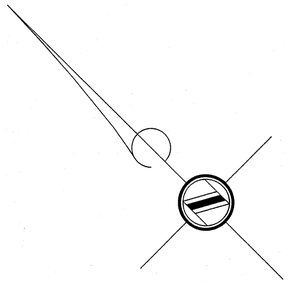
SCALE 1: 300

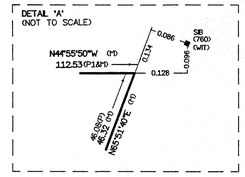
5 0 5 10 15 20 30metres

David B. Searles Surveying Ltd.
ONTARIO LAND SURVEYORS

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







LEGEND

■	DENOTES	MONUMENT FOUND
□	DENOTES	MONUMENT SET
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
IB	DENOTES	IRON BAR
IP	DENOTES	IRON PIPE
WIT	DENOTES	WITNESS
OU	DENOTES	ORIGIN UNKNOWN
CC	DENOTES	CUT CROSS
TLCB	DENOTES	TRAFFIC LIGHT CONTROL BOX
TLP	DENOTES	TRAFFIC LIGHT POLE
CATV	DENOTES	CABLE TELEVISION BOX
CB	DENOTES	CATCH BASIN
MH	DENOTES	MAINTENANCE HOLE COVER
WP(HD)	DENOTES	WOOD POLE(HYDRO)
BOS	DENOTES	BOTTOM OF SLOPE
ø	DENOTES	DIAMETER
LS	DENOTES	LIGHT STANDARD
ANC	DENOTES	ANCHOR
CSW	DENOTES	CONCRETE SIDEWALK
HV	DENOTES	HYDRO VAULT
CPAD	DENOTES	CONCRETE PAD
CCUT	DENOTES	CONCRETE CUT
BLKW	DENOTES	CONCRETE BLOCK ENCLOSURE
WPHLS	DENOTES	WOODEN POLE HYDRO STREET LAMP
WV	DENOTES	WATER VALVE
ICV	DENOTES	IRRIGATION CONTROL VALVE
BOL	DENOTES	BOLLARD
GV	DENOTES	GAS VALVE
FF	DENOTES	FINISHED FLOOR
DS	DENOTES	DOOR SILL
P	DENOTES	SURVEYOR'S REAL PROPERTY REPORT BY McCONNELL MAUGHAN LIMITED O.L.S. DATED JULY 6, 1992 PLAN No.72-92-1S
P1	DENOTES	PLAN 20R-13210
760	DENOTES	McCONELL MAUGHAN LIMITED O.L.S.
RW	DENOTES	REPLACED WITH
	DENOTES	DECIDUOUS TREE
	DENOTES	CONIFEROUS TREE

AS BUILT TOPOGRAPHIC DETAIL ADDED APRIL 6th, 2005

BENCHMARK NOTE

ELEVATIONS ARE REFERRED TO THE TOWN OF OAKVILLE BENCHMARK No.110, LOCATED ON THE TOP OF D.H.O. MONUMENT No.11 AT THE NORTHWEST CORNER OF TRAFALGAR VILLAGE PARKING LOT ON SOUTH SERVICE ROAD HAVING AN ELEVATION OF 107.1723m.

CAUTION

LOCATION OF ALL UTILITES IS APPROXIMATE AND ALL UTILITES SHOULD BE CONTACTED PRIOR TO ANY DIGGING OR CONSTRUCTION

SURVEYOR'S CERTIFICATE

I CERTIFY THAT :

1. THE FIELD SURVEY REPRESENTED ON THIS PLAN WAS COMPLETED ON THE DAY OF

DATE

DAVID B. SEARLES - ONTARIO LAND SURVEYOR

David B.Searles Surveying Ltd.
ONTARIO LAND SURVEYORS
4284 VILLAGE CENTRE COURT, MISSISSAUGA, ONTARIO L4Z 1S2
(905) 273-6840 FAX: (905) 896-4410
E MAIL: DBSOLS @ ONLABN.COM

Drawn	Checked

File No. 128-2-04

Computer Storage File No.	Operator	Disk Plan Storage No.	Plan Index No.
		128-2-04DWG	D-11

Appendix F - Laboratory Certificates of Analysis

AGAT Laboratories

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

CLIENT NAME: B.I.G. CONSULTING INC.
12-5500 TOMKEN ROAD
MISSISSAUGA, ON L4W 2Z4
416-214-4880

ATTENTION TO: Fernando Contento

PROJECT: BIGC-ENV-349B

AGAT WORK ORDER: 21T707091

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Feb 17, 2021

PAGES (INCLUDING COVER): 19

VERSION*: 3

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

Notes

VERSION 3:V3 issued 2021-02-17. Supersedes version 2 reported 2021-02-12.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

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

DATE RECEIVED: 2021-02-03

DATE REPORTED: 2021-02-17

		SAMPLE DESCRIPTION:		BH/MW104	BH/MW111	BH/MW112	BH/MW113	DUP11201
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2021-02-03	2021-02-03	2021-02-03	2021-02-03	2021-02-03
Parameter	**Unit**	**G / S**	**RDL**	**2045871**	**2045897**	**2045899**	**2045902**	**2045928**
Naphthalene	µg/L	11	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
Acenaphthene	µg/L	4.1	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
Phenanthrene	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	2.4	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
Pyrene	µg/L	4.1	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	1	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
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	3.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sediment				No	No	No	No	No
Surrogate	**Unit**	**Acceptable Limits**						
Naphthalene-d8	%	50-140		63.0	82.0	86.0	87.0	90.0
Acridine-d9	%	50-140		107	96.0	87.0	98.0	79.0
Terphenyl-d14	%	50-140		72.0	110	80.0	94.0	98.0

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Coarse 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.

2045871-2045928 Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

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

DATE RECEIVED: 2021-02-03

DATE REPORTED: 2021-02-17

		SAMPLE DESCRIPTION:		BH/MW101	Trip Blank
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-02-03	2021-02-03
Parameter	**Unit**	**G / S**	**RDL**	**2045847**	**2045935**
F1 (C6 - C10)	µg/L	750	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA
Sediment				Trace	No
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	% Recovery	50-140		99	91
Terphenyl	% Recovery	60-140		79	79

Certified By: Pinkal Patel

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

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

DATE RECEIVED: 2021-02-03 **DATE REPORTED: 2021-02-17**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Coarse 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.

2045847 Sediment present in sample.
The C6-C10 fraction is calculated using Toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

2045935 The C6-C10 fraction is calculated using Toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

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

DATE RECEIVED: 2021-02-03 **DATE REPORTED: 2021-02-17**

		SAMPLE DESCRIPTION:		BH/MW104	BH/MW112	DUP11201
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2021-02-03	2021-02-03	2021-02-03
Parameter	Unit	G / S	RDL	2045871	2045899	2045928
F1 (C6-C10)	µg/L	750	25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA
Sediment				No	No	No
Surrogate	**Unit**	**Acceptable Limits**				
Toluene-d8	% Recovery	50-140		93	97	106
Terphenyl	% Recovery	60-140		77	79	113

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Coarse 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.

2045871-2045928 The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

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

DATE RECEIVED: 2021-02-03

DATE REPORTED: 2021-02-17

		SAMPLE DESCRIPTION:		BH/MW101	BH/MW104	BH/MW112	DUP11201	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2021-02-03	2021-02-03	2021-02-03	2021-02-03	2021-02-03
Parameter	Unit	G / S	RDL	2045847	2045871	2045899	2045928	2045935
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	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
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	5	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
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	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
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	5.0	0.20	0.22	0.22	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	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
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	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
Dibromochloromethane	µg/L	25	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	30	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
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Certified By: Jinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

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

DATE RECEIVED: 2021-02-03 **DATE REPORTED: 2021-02-17**

		SAMPLE DESCRIPTION:		BH/MW101	BH/MW104	BH/MW112	DUP11201	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2021-02-03	2021-02-03	2021-02-03	2021-02-03	2021-02-03
Parameter	**Unit**	**G / S**	**RDL**	**2045847**	**2045871**	**2045899**	**2045928**	**2045935**
Bromoform	µg/L	25	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
1,1,2,2-Tetrachloroethane	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	59	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
1,2-Dichlorobenzene	µg/L	3	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	300	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	51	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**						
Toluene-d8	% Recovery	50-140		101	125	103	102	117
4-Bromofluorobenzene	% Recovery	50-140		87	88	84	88	88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Coarse 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.

2045847-2045935 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

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

DATE RECEIVED: 2021-02-03

DATE REPORTED: 2021-02-17

		SAMPLE DESCRIPTION:		BH/MW101	BH/MW108	BH/MW112	DUP11201
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2021-02-03	2021-02-03	2021-02-03	2021-02-03
Parameter	Unit	G / S	RDL	2045847	2045888	2045899	2045928
Dissolved Antimony	µg/L	6	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	25	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Barium	µg/L	1000	2.0	115	62.4	70.7	66.1
Dissolved Beryllium	µg/L	4	0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	5000	10.0	351	590	746	773
Dissolved Cadmium	µg/L	2.7	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
Dissolved Cobalt	µg/L	3.8	0.50	0.57	1.65	<0.50	<0.50
Dissolved Copper	µg/L	87	1.0	10.1	1.5	1.1	<1.0
Dissolved Lead	µg/L	10	0.50	1.54	2.40	2.09	2.29
Dissolved Molybdenum	µg/L	70	0.50	1.90	0.81	0.76	1.38
Dissolved Nickel	µg/L	100	3.0	<3.0	<3.0	<3.0	<3.0
Dissolved Selenium	µg/L	10	1.0	2.1	2.1	2.5	3.4
Dissolved Silver	µg/L	1.5	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
Dissolved Uranium	µg/L	20	0.50	1.65	<0.50	<0.50	<0.50
Dissolved Vanadium	µg/L	6.2	0.40	<0.40	<0.40	<0.40	<0.40
Dissolved Zinc	µg/L	1100	5.0	<5.0	<5.0	<5.0	<5.0
Mercury	µg/L	0.29	0.02	<0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	2.000	<2.000	<2.000	<2.000	<2.000
Cyanide, Free	µg/L	66	2	<2	<2	<2	<2
Dissolved Sodium	µg/L	490000	500	**776000**	402000	475000	456000
Chloride	µg/L	790000	5000	**1270000**	**1160000**	**1340000**	**1330000**
Electrical Conductivity	uS/cm	NA	2	4630	4400	4790	4810
pH	pH Units		NA	7.66	7.49	7.52	7.56

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

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

DATE RECEIVED: 2021-02-03 **DATE REPORTED: 2021-02-17**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Coarse 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.

2045847-2045928 Metals analysis completed on a filtered sample.

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

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

DATE RECEIVED: 2021-02-03 **DATE REPORTED: 2021-02-17**

		SAMPLE DESCRIPTION:		BH/MW103	BH/MW107
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-02-03	2021-02-03
Parameter	Unit	G / S	RDL	2045869	2045886
Dissolved Sodium	µg/L	490000	500	**576000**	**566000**
Chloride	µg/L	790000	5000	**1640000**	**1560000**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Coarse 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.

2045869-2045886 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Exceedance Summary

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
2045847	BH/MW101	ON T2 PGW CT	O. Reg. 153(511) - Metals & Inorganics (Water)	Chloride	µg/L	790000	1270000
2045847	BH/MW101	ON T2 PGW CT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Sodium	µg/L	490000	776000
2045869	BH/MW103	ON T2 PGW CT	O. Reg. 153(511) - ORPs (Water)	Chloride	µg/L	790000	1640000
2045869	BH/MW103	ON T2 PGW CT	O. Reg. 153(511) - ORPs (Water)	Dissolved Sodium	µg/L	490000	576000
2045886	BH/MW107	ON T2 PGW CT	O. Reg. 153(511) - ORPs (Water)	Chloride	µg/L	790000	1560000
2045886	BH/MW107	ON T2 PGW CT	O. Reg. 153(511) - ORPs (Water)	Dissolved Sodium	µg/L	490000	566000
2045888	BH/MW108	ON T2 PGW CT	O. Reg. 153(511) - Metals & Inorganics (Water)	Chloride	µg/L	790000	1160000
2045899	BH/MW112	ON T2 PGW CT	O. Reg. 153(511) - Metals & Inorganics (Water)	Chloride	µg/L	790000	1340000
2045928	DUP11201	ON T2 PGW CT	O. Reg. 153(511) - Metals & Inorganics (Water)	Chloride	µg/L	790000	1330000

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

Trace Organics Analysis

RPT Date: Feb 17, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)															
F1 (C6 - C10)	2058819		<25	<25	NA	< 25	99%	60%	140%	92%	60%	140%	101%	60%	140%
F2 (C10 to C16)	2045847	2045847	< 100	< 100	NA	< 100	105%	60%	140%	106%	60%	140%	83%	60%	140%
F3 (C16 to C34)	2045847	2045847	< 100	< 100	NA	< 100	95%	60%	140%	105%	60%	140%	93%	60%	140%
F4 (C34 to C50)	2045847	2045847	< 100	< 100	NA	< 100	91%	60%	140%	118%	60%	140%	119%	60%	140%
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	2061685		<0.20	<0.20	NA	< 0.20	79%	50%	140%	76%	50%	140%	104%	50%	140%
Vinyl Chloride	2061685		<0.17	<0.17	NA	< 0.17	109%	50%	140%	82%	50%	140%	75%	50%	140%
Bromomethane	2061685		<0.20	<0.20	NA	< 0.20	115%	50%	140%	95%	50%	140%	123%	50%	140%
Trichlorofluoromethane	2061685		<0.40	<0.40	NA	< 0.40	114%	50%	140%	89%	50%	140%	82%	50%	140%
Acetone	2061685		<1.0	<1.0	NA	< 1.0	88%	50%	140%	90%	50%	140%	96%	50%	140%
1,1-Dichloroethylene	2061685		<0.30	<0.30	NA	< 0.30	84%	50%	140%	72%	60%	130%	77%	50%	140%
Methylene Chloride	2061685		<0.30	<0.30	NA	< 0.30	82%	50%	140%	88%	60%	130%	98%	50%	140%
trans- 1,2-Dichloroethylene	2061685		<0.20	<0.20	NA	< 0.20	92%	50%	140%	108%	60%	130%	103%	50%	140%
Methyl tert-butyl ether	2061685		<0.20	<0.20	NA	< 0.20	88%	50%	140%	101%	60%	130%	98%	50%	140%
1,1-Dichloroethane	2061685		<0.30	<0.30	NA	< 0.30	76%	50%	140%	92%	60%	130%	92%	50%	140%
Methyl Ethyl Ketone	2061685		<1.0	<1.0	NA	< 1.0	98%	50%	140%	80%	50%	140%	91%	50%	140%
cis- 1,2-Dichloroethylene	2061685		<0.20	<0.20	NA	< 0.20	74%	50%	140%	86%	60%	130%	103%	50%	140%
Chloroform	2061685		<0.20	<0.20	NA	< 0.20	76%	50%	140%	88%	60%	130%	107%	50%	140%
1,2-Dichloroethane	2061685		<0.20	<0.20	NA	< 0.20	85%	50%	140%	94%	60%	130%	98%	50%	140%
1,1,1-Trichloroethane	2061685		<0.30	<0.30	NA	< 0.30	96%	50%	140%	85%	60%	130%	86%	50%	140%
Carbon Tetrachloride	2061685		<0.20	<0.20	NA	< 0.20	77%	50%	140%	89%	60%	130%	82%	50%	140%
Benzene	2061685		<0.20	<0.20	NA	< 0.20	77%	50%	140%	76%	60%	130%	87%	50%	140%
1,2-Dichloropropane	2061685		<0.20	<0.20	NA	< 0.20	103%	50%	140%	74%	60%	130%	84%	50%	140%
Trichloroethylene	2061685		<0.20	<0.20	NA	< 0.20	75%	50%	140%	105%	60%	130%	102%	50%	140%
Bromodichloromethane	2061685		<0.20	<0.20	NA	< 0.20	111%	50%	140%	97%	60%	130%	98%	50%	140%
Methyl Isobutyl Ketone	2061685		<1.0	<1.0	NA	< 1.0	81%	50%	140%	80%	50%	140%	82%	50%	140%
1,1,2-Trichloroethane	2061685		<0.20	<0.20	NA	< 0.20	91%	50%	140%	105%	60%	130%	101%	50%	140%
Toluene	2061685		<0.20	<0.20	NA	< 0.20	73%	50%	140%	88%	60%	130%	69%	50%	140%
Dibromochloromethane	2061685		<0.10	<0.10	NA	< 0.10	114%	50%	140%	113%	60%	130%	107%	50%	140%
Ethylene Dibromide	2061685		<0.10	<0.10	NA	< 0.10	95%	50%	140%	108%	60%	130%	100%	50%	140%
Tetrachloroethylene	2061685		<0.20	<0.20	NA	< 0.20	85%	50%	140%	110%	60%	130%	80%	50%	140%
1,1,1,2-Tetrachloroethane	2061685		<0.10	<0.10	NA	< 0.10	91%	50%	140%	111%	60%	130%	90%	50%	140%
Chlorobenzene	2061685		<0.10	<0.10	NA	< 0.10	83%	50%	140%	98%	60%	130%	91%	50%	140%
Ethylbenzene	2061685		<0.10	<0.10	NA	< 0.10	83%	50%	140%	81%	60%	130%	73%	50%	140%
m & p-Xylene	2061685		<0.20	<0.20	NA	< 0.20	71%	50%	140%	90%	60%	130%	73%	50%	140%
Bromoform	2061685		<0.10	<0.10	NA	< 0.10	108%	50%	140%	114%	60%	130%	101%	50%	140%
Styrene	2061685		<0.10	<0.10	NA	< 0.10	83%	50%	140%	81%	60%	130%	83%	50%	140%
1,1,2,2-Tetrachloroethane	2061685		<0.10	<0.10	NA	< 0.10	98%	50%	140%	100%	60%	130%	102%	50%	140%
o-Xylene	2061685		<0.10	<0.10	NA	< 0.10	77%	50%	140%	94%	60%	130%	81%	50%	140%

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T707091
PROJECT: BIGC-ENV-349B
ATTENTION TO: Fernando Contento
SAMPLING SITE:227-212 Cross
SAMPLED BY:TVM/AB

Trace Organics Analysis (Continued)

RPT Date: Feb 17, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	2061685		<0.10	<0.10	NA	< 0.10	101%	50%	140%	117%	60%	130%	113%	50%	140%
1,4-Dichlorobenzene	2061685		<0.10	<0.10	NA	< 0.10	102%	50%	140%	122%	60%	130%	115%	50%	140%
1,2-Dichlorobenzene	2061685		<0.10	<0.10	NA	< 0.10	106%	50%	140%	119%	60%	130%	119%	50%	140%
n-Hexane	2061685		<0.20	<0.20	NA	< 0.20	105%	50%	140%	86%	60%	130%	89%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6-C10)	2058819		<25	<25	NA	< 25	99%	60%	140%	92%	60%	140%	101%	60%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	2045871	2045871	< 0.20	< 0.20	NA	< 0.20	102%	50%	140%	115%	50%	140%	88%	50%	140%
Acenaphthylene	2045871	2045871	< 0.20	< 0.20	NA	< 0.20	115%	50%	140%	85%	50%	140%	87%	50%	140%
Acenaphthene	2045871	2045871	< 0.20	< 0.20	NA	< 0.20	85%	50%	140%	74%	50%	140%	74%	50%	140%
Fluorene	2045871	2045871	< 0.20	< 0.20	NA	< 0.20	74%	50%	140%	71%	50%	140%	71%	50%	140%
Phenanthrene	2045871	2045871	< 0.10	< 0.10	NA	< 0.10	77%	50%	140%	75%	50%	140%	75%	50%	140%
Anthracene	2045871	2045871	< 0.10	< 0.10	NA	< 0.10	71%	50%	140%	77%	50%	140%	81%	50%	140%
Fluoranthene	2045871	2045871	< 0.20	< 0.20	NA	< 0.20	70%	50%	140%	74%	50%	140%	82%	50%	140%
Pyrene	2045871	2045871	< 0.20	< 0.20	NA	< 0.20	79%	50%	140%	78%	50%	140%	80%	50%	140%
Benzo(a)anthracene	2045871	2045871	< 0.20	< 0.20	NA	< 0.20	85%	50%	140%	85%	50%	140%	71%	50%	140%
Chrysene	2045871	2045871	< 0.10	< 0.10	NA	< 0.10	81%	50%	140%	71%	50%	140%	74%	50%	140%
Benzo(b)fluoranthene	2045871	2045871	< 0.10	< 0.10	NA	< 0.10	115%	50%	140%	70%	50%	140%	77%	50%	140%
Benzo(k)fluoranthene	2045871	2045871	< 0.10	< 0.10	NA	< 0.10	114%	50%	140%	71%	50%	140%	75%	50%	140%
Benzo(a)pyrene	2045871	2045871	< 0.01	< 0.01	NA	< 0.01	85%	50%	140%	79%	50%	140%	96%	50%	140%
Indeno(1,2,3-cd)pyrene	2045871	2045871	< 0.20	< 0.20	NA	< 0.20	80%	50%	140%	85%	50%	140%	85%	50%	140%
Dibenz(a,h)anthracene	2045871	2045871	< 0.20	< 0.20	NA	< 0.20	71%	50%	140%	86%	50%	140%	80%	50%	140%
Benzo(g,h,i)perylene	2045871	2045871	< 0.20	< 0.20	NA	< 0.20	107%	50%	140%	81%	50%	140%	80%	50%	140%

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

Certified By: Jinkal Patel

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

Water Analysis

RPT Date: Feb 17, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Dissolved Antimony	2050451		<1.0	<1.0	NA	< 1.0	104%	70%	130%	103%	80%	120%	109%	70%	130%
Dissolved Arsenic	2050451		<1.0	<1.0	NA	< 1.0	88%	70%	130%	102%	80%	120%	114%	70%	130%
Dissolved Barium	2050451		63.3	63.7	0.6%	< 2.0	102%	70%	130%	102%	80%	120%	101%	70%	130%
Dissolved Beryllium	2050451		<0.50	<0.50	NA	< 0.50	97%	70%	130%	104%	80%	120%	112%	70%	130%
Dissolved Boron	2050451		71.8	73.1	1.8%	< 10.0	100%	70%	130%	102%	80%	120%	109%	70%	130%
Dissolved Cadmium	2050451		<0.20	<0.20	NA	< 0.20	101%	70%	130%	100%	80%	120%	111%	70%	130%
Dissolved Chromium	2050451		<2.0	<2.0	NA	< 2.0	98%	70%	130%	93%	80%	120%	99%	70%	130%
Dissolved Cobalt	2050451		<0.50	<0.50	NA	< 0.50	98%	70%	130%	94%	80%	120%	98%	70%	130%
Dissolved Copper	2050451		<1.0	<1.0	NA	< 1.0	96%	70%	130%	94%	80%	120%	95%	70%	130%
Dissolved Lead	2050451		<0.50	<0.50	NA	< 0.50	99%	70%	130%	98%	80%	120%	103%	70%	130%
Dissolved Molybdenum	2050451		5.05	5.73	12.6%	< 0.50	100%	70%	130%	102%	80%	120%	107%	70%	130%
Dissolved Nickel	2050451		<3.0	<3.0	NA	< 3.0	99%	70%	130%	94%	80%	120%	98%	70%	130%
Dissolved Selenium	2050451		<1.0	<1.0	NA	< 1.0	97%	70%	130%	101%	80%	120%	118%	70%	130%
Dissolved Silver	2050451		<0.20	<0.20	NA	< 0.20	98%	70%	130%	93%	80%	120%	95%	70%	130%
Dissolved Thallium	2050451		<0.30	<0.30	NA	< 0.30	103%	70%	130%	99%	80%	120%	104%	70%	130%
Dissolved Uranium	2050451		7.47	7.30	2.3%	< 0.50	108%	70%	130%	104%	80%	120%	112%	70%	130%
Dissolved Vanadium	2050451		0.84	0.63	NA	< 0.40	102%	70%	130%	96%	80%	120%	100%	70%	130%
Dissolved Zinc	2050451		5.4	6.7	NA	< 5.0	106%	70%	130%	106%	80%	120%	113%	70%	130%
Mercury	2045847	2045847	<0.02	<0.02	NA	< 0.02	102%	70%	130%	104%	80%	120%	100%	70%	130%
Chromium VI	2050022		<2.000	<2.000	NA	< 2	105%	70%	130%	108%	80%	120%	109%	70%	130%
Cyanide, Free	2050225		<2	<2	NA	< 2	91%	70%	130%	98%	80%	120%	110%	70%	130%
Dissolved Sodium	2047398		7310	7460	2.0%	< 50	100%	70%	130%	100%	80%	120%	98%	70%	130%
Chloride	2050225		85300	87100	2.1%	< 100	97%	70%	130%	104%	80%	120%	103%	70%	130%
Electrical Conductivity	2050022		1450	1450	0.0%	< 2	103%	90%	110%						
pH	2050022		7.70	7.73	0.4%	NA	101%	90%	110%						

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

O. Reg. 153(511) - Metals & Inorganics (Water)															
Chromium VI	2045929	2045929	<2.000	<2.000	NA	< 2	104%	70%	130%	101%	80%	120%	104%	70%	130%
Electrical Conductivity	2045929	2045929	6270	6290	0.3%	< 2	103%	90%	110%						
pH	2045929	2045929	7.83	7.87	0.5%	NA	101%	90%	110%						

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

Certified By:

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)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
F3 (C16 to C34)	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 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

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T707091

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:227-212 Cross

SAMPLED BY:TVM/AB

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 QuickChem Method 10-124-13-1-B	LACHAT FIA
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	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

1 Cy Blk

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 21T707091

Cooler Quantity:

Arrival Temperatures: 8.5 | 8.1 | 7.7

Custody Seal Intact: ☑ Yes ☐ No ☐ N/A

Notes: FREE ICE

Report Information:

Company: Bile Consulting Inc
Contact: Fernando Contreras
Address: 5500 Tomken Rd. Unit 12, Mississauga
Phone: 647-966-6894 Fax:
Reports to be sent to:
1. Email: FContreras@brownfieldeng.com
2. Email:

Project Information:

Project: 227-217 Cross BileC-ENV-349B
Site Location:
Sampled By: TVH / AB
AGAT ID #: 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: Bile Consulting Inc
Contact: Laine Daugherty
Address: 5500 Tomken Rd Mississauga
Email: LDaugherty@brownfieldeng.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 2 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture
Soil Texture (Check One)
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
(Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
(Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT (Most Analysis) ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs, Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: Total PCBs ☐ Aroclor	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Vapour Intrusion						Potentially Hazardous or High Concentration (Y/N)
BH/MW101	Feb 3, 2021	AM PM	1	GW		Y	✓		✓			✓											
BH/MW103		AM PM	2														✓						
BH/MW104		AM PM	10		Sediment, proceed with analysis				✓	✓		✓											
BH/MW107		AM PM	2														✓						
BH/MW108		AM PM	6			Y	✓																
BH/MW111		AM PM	2							✓													
BH/MW112		AM PM	16			Y	✓		✓	✓		✓											
BH/MW113		AM PM	2							✓													
DUP112021		AM PM	16			Y	✓		✓	✓		✓											
BH/MW115		AM PM	6			Y	✓																
Trip Blank		AM PM	2						✓			✓											

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Travis Van Holst	Feb 3/2021	6:15 pm	M. JOHN		

Page 1 of 1

Nº: T114600

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CLIENT NAME: B.I.G. CONSULTING INC.
12-5500 TOMKEN ROAD
MISSISSAUGA, ON L4W 2Z4
416-214-4880

ATTENTION TO: Fernando Contento

PROJECT: BIGC-ENV-349B

AGAT WORK ORDER: 21T700748

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jan 25, 2021

PAGES (INCLUDING COVER): 16

VERSION*: 1

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

*Notes

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Certificate of Analysis

AGAT WORK ORDER: 21T700748

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

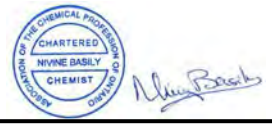
O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-01-18

DATE REPORTED: 2021-01-25

SAMPLE DESCRIPTION:				BH101-SS1	BH102-SS1	BH103-SS1	BH104-SS1	BH105-SS1
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2021-01-13 09:30	2021-01-13 11:00	2021-01-13 12:30	2021-01-13 14:00	2021-01-14 10:00
Parameter	Unit	G / S	RDL	1966584	1966586	1966588	1966589	1966590
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	13	8	9	10	12
Barium	µg/g	390	2	122	141	40	48	41
Beryllium	µg/g	4	0.5	0.5	0.6	<0.5	<0.5	<0.5
Boron	µg/g	120	5	10	7	12	11	9
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.33	0.58	0.20	0.18	0.21
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	0.5	<0.5
Chromium	µg/g	160	5	18	17	7	6	6
Cobalt	µg/g	22	0.5	11.5	10.7	5.9	5.4	4.9
Copper	µg/g	140	1	493	80	33	31	44
Lead	µg/g	120	1	18	21	21	23	28
Molybdenum	µg/g	6.9	0.5	1.6	1.3	1.1	1.2	1.1
Nickel	µg/g	100	1	23	22	10	11	10
Selenium	µg/g	2.4	0.4	0.8	0.9	0.5	0.5	0.5
Silver	µg/g	20	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/g	1	0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Uranium	µg/g	23	0.5	1.3	1.4	0.5	0.6	<0.5
Vanadium	µg/g	86	1	26	27	12	10	11
Zinc	µg/g	340	5	121	101	142	169	106
Chromium, Hexavalent	µg/g	8	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
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.470	0.664	0.912	0.269	0.488
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	4.15	6.67	8.99	1.03	6.01
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	6.18	7.66	7.83	7.83	7.91

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 21T700748

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-18

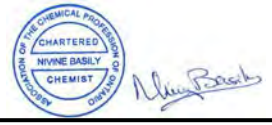
DATE REPORTED: 2021-01-25

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

1966584-1966590 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:



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Certificate of Analysis

AGAT WORK ORDER: 21T700748

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-18

DATE REPORTED: 2021-01-25

		SAMPLE DESCRIPTION:		BH101-SS1	BH102-SS1	BH103-SS1	BH104-SS1	BH105-SS1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-01-13 09:30	2021-01-13 11:00	2021-01-13 12:30	2021-01-13 14:00	2021-01-14 10:00
Parameter	Unit	G / S	RDL	1966584	1966586	1966588	1966589	1966590
Naphthalene	µg/g	0.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	7.9	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	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
Indeno(1,2,3-cd)pyrene	µg/g	0.38	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
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	16.6	13.4	7.2	8.5	10.9
Surrogate	Unit	Acceptable Limits						
Naphthalene-d8	%	50-140		84	96	96	79	115
Acenaphthene-d10	%	50-140		91	90	84	85	102
Chrysene-d12	%	50-140		83	72	70	73	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

1966584-1966590 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: N Popowkolof

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T700748

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-18

DATE REPORTED: 2021-01-25

				SAMPLE DESCRIPTION:	BH101-SS2	BH102-SS2	BH105-SS3
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-01-13 09:35	2021-01-13 11:05	2021-01-14 10:15
Parameter	Unit	G / S	RDL		1966585	1966587	1966591
F1 (C6 to C10)	µg/g	55	5		<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	<5	<5
F2 (C10 to C16)	µg/g	98	10		<10	<10	<10
F3 (C16 to C34)	µg/g	300	50		<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50		<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50		NA	NA	NA
Moisture Content	%		0.1		16.9	12.8	10.9
Surrogate	Unit	Acceptable Limits					
Terphenyl	%	60-140			77	72	94

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

1966585-1966591 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

AGAT Laboratories
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Certificate of Analysis

AGAT WORK ORDER: 21T700748

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-18

DATE REPORTED: 2021-01-25

SAMPLE DESCRIPTION:				BH101-SS2	BH102-SS2	BH105-SS3
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-01-13 09:35	2021-01-13 11:05	2021-01-14 10:15
Parameter	Unit	G / S	RDL	1966585	1966587	1966591
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.47	0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	1.9	0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	1.5	0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	2.3	0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	1.1	0.05	<0.05	<0.05	<0.05

Certified By: NPopowkolof

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Certificate of Analysis

AGAT WORK ORDER: 21T700748

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-18

DATE REPORTED: 2021-01-25

				SAMPLE DESCRIPTION:	BH101-SS2	BH102-SS2	BH105-SS3
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-01-13 09:35	2021-01-13 11:05	2021-01-14 10:15
Parameter	Unit	G / S	RDL		1966585	1966587	1966591
m & p-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
Bromoform	ug/g	0.27	0.05		<0.05	<0.05	<0.05
Styrene	ug/g	0.7	0.05		<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05		<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	4.8	0.05		<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.083	0.05		<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.2	0.05		<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	3.1	0.05		<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.04		<0.04	<0.04	<0.04
n-Hexane	µg/g	2.8	0.05		<0.05	<0.05	<0.05
Moisture Content	%		0.1		16.9	12.8	10.9
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			110	108	103
4-Bromofluorobenzene	% Recovery	50-140			81	81	80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

1966585-1966591 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkof

AGAT Laboratories

Guideline Violation

AGAT WORK ORDER: 21T700748

PROJECT: BIGC-ENV-349B

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CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
1966584	BH101-SS1	ON T2 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Copper	µg/g	140	493
1966586	BH102-SS1	ON T2 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	6.67
1966588	BH103-SS1	ON T2 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	0.912
1966588	BH103-SS1	ON T2 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	8.99
1966590	BH105-SS1	ON T2 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	6.01

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T700748
PROJECT: BIGC-ENV-349B
ATTENTION TO: Fernando Contento
SAMPLING SITE:
SAMPLED BY:

Soil Analysis

RPT Date: Jan 25, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	1954940		<0.8	<0.8	NA	< 0.8	113%	70%	130%	102%	80%	120%	93%	70%	130%
Arsenic	1954940		4	4	NA	< 1	99%	70%	130%	97%	80%	120%	108%	70%	130%
Barium	1954940		59	61	3.3%	< 2	106%	70%	130%	97%	80%	120%	104%	70%	130%
Beryllium	1954940		<0.5	<0.5	NA	< 0.5	74%	70%	130%	117%	80%	120%	96%	70%	130%
Boron	1954940		8	8	NA	< 5	100%	70%	130%	109%	80%	120%	91%	70%	130%
Boron (Hot Water Soluble)	1966584	1966584	0.33	0.35	NA	< 0.10	95%	60%	140%	101%	70%	130%	98%	60%	140%
Cadmium	1954940		<0.5	<0.5	NA	< 0.5	105%	70%	130%	101%	80%	120%	97%	70%	130%
Chromium	1954940		23	23	NA	< 5	86%	70%	130%	102%	80%	120%	102%	70%	130%
Cobalt	1954940		3.1	3.0	3.3%	< 0.5	87%	70%	130%	95%	80%	120%	98%	70%	130%
Copper	1954940		8	8	0.0%	< 1	87%	70%	130%	101%	80%	120%	93%	70%	130%
Lead	1954940		8	8	0.0%	< 1	105%	70%	130%	95%	80%	120%	90%	70%	130%
Molybdenum	1954940		<0.5	<0.5	NA	< 0.5	90%	70%	130%	97%	80%	120%	99%	70%	130%
Nickel	1954940		6	6	0.0%	< 1	88%	70%	130%	100%	80%	120%	96%	70%	130%
Selenium	1954940		0.5	0.5	NA	< 0.4	116%	70%	130%	101%	80%	120%	101%	70%	130%
Silver	1954940		<0.2	<0.2	NA	< 0.2	104%	70%	130%	101%	80%	120%	88%	70%	130%
Thallium	1954940		<0.4	<0.4	NA	< 0.4	101%	70%	130%	102%	80%	120%	97%	70%	130%
Uranium	1954940		<0.5	<0.5	NA	< 0.5	101%	70%	130%	100%	80%	120%	105%	70%	130%
Vanadium	1954940		13	13	0.0%	< 1	87%	70%	130%	91%	80%	120%	100%	70%	130%
Zinc	1954940		29	29	0.0%	< 5	93%	70%	130%	101%	80%	120%	93%	70%	130%
Chromium, Hexavalent	1954829		<0.2	<0.2	NA	< 0.2	99%	70%	130%	93%	80%	120%	91%	70%	130%
Cyanide, Free	1982741		< 0.040	< 0.040	NA	< 0.040	103%	70%	130%	94%	80%	120%	110%	70%	130%
Mercury	1954940		0.25	0.25	NA	< 0.10	100%	70%	130%	101%	80%	120%	94%	70%	130%
Electrical Conductivity (2:1)	1966584	1966584	0.470	0.436	7.5%	< 0.005	103%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	1966584	1966584	4.15	4.17	0.5%	NA									
pH, 2:1 CaCl2 Extraction	1963928		6.87	7.00	1.9%	NA	100%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T700748
PROJECT: BIGC-ENV-349B
ATTENTION TO: Fernando Contento
SAMPLING SITE:
SAMPLED BY:

Trace Organics Analysis

RPT Date: Jan 25, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	1966588	1966588	<0.05	<0.05	NA	< 0.05	118%	50%	140%	83%	50%	140%	86%	50%	140%
Acenaphthylene	1966588	1966588	<0.05	<0.05	NA	< 0.05	111%	50%	140%	78%	50%	140%	86%	50%	140%
Acenaphthene	1966588	1966588	<0.05	<0.05	NA	< 0.05	111%	50%	140%	81%	50%	140%	89%	50%	140%
Fluorene	1966588	1966588	<0.05	<0.05	NA	< 0.05	107%	50%	140%	88%	50%	140%	97%	50%	140%
Phenanthrene	1966588	1966588	<0.05	<0.05	NA	< 0.05	97%	50%	140%	71%	50%	140%	80%	50%	140%
Anthracene	1966588	1966588	<0.05	<0.05	NA	< 0.05	108%	50%	140%	79%	50%	140%	98%	50%	140%
Fluoranthene	1966588	1966588	<0.05	<0.05	NA	< 0.05	108%	50%	140%	81%	50%	140%	89%	50%	140%
Pyrene	1966588	1966588	<0.05	<0.05	NA	< 0.05	101%	50%	140%	75%	50%	140%	83%	50%	140%
Benz(a)anthracene	1966588	1966588	<0.05	<0.05	NA	< 0.05	68%	50%	140%	82%	50%	140%	69%	50%	140%
Chrysene	1966588	1966588	<0.05	<0.05	NA	< 0.05	81%	50%	140%	73%	50%	140%	77%	50%	140%
Benzo(b)fluoranthene	1966588	1966588	<0.05	<0.05	NA	< 0.05	67%	50%	140%	76%	50%	140%	85%	50%	140%
Benzo(k)fluoranthene	1966588	1966588	<0.05	<0.05	NA	< 0.05	99%	50%	140%	111%	50%	140%	97%	50%	140%
Benzo(a)pyrene	1966588	1966588	<0.05	<0.05	NA	< 0.05	71%	50%	140%	73%	50%	140%	82%	50%	140%
Indeno(1,2,3-cd)pyrene	1966588	1966588	<0.05	<0.05	NA	< 0.05	65%	50%	140%	82%	50%	140%	79%	50%	140%
Dibenz(a,h)anthracene	1966588	1966588	<0.05	<0.05	NA	< 0.05	66%	50%	140%	78%	50%	140%	92%	50%	140%
Benzo(g,h,i)perylene	1966588	1966588	<0.05	<0.05	NA	< 0.05	76%	50%	140%	75%	50%	140%	69%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)															
F1 (C6 to C10)	1966591	1966591	< 5	< 5	NA	< 5	86%	60%	140%	108%	60%	140%	119%	60%	140%
F2 (C10 to C16)	1977071		< 10	< 10	NA	< 10	90%	60%	140%	109%	60%	140%	97%	60%	140%
F3 (C16 to C34)	1977071		< 50	< 50	NA	< 50	90%	60%	140%	110%	60%	140%	79%	60%	140%
F4 (C34 to C50)	1977071		< 50	< 50	NA	< 50	112%	60%	140%	96%	60%	140%	96%	60%	140%
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	1966591	1966591	<0.05	<0.05	NA	< 0.05	76%	50%	140%	73%	50%	140%	87%	50%	140%
Vinyl Chloride	1966591	1966591	<0.02	<0.02	NA	< 0.02	96%	50%	140%	77%	50%	140%	87%	50%	140%
Bromomethane	1966591	1966591	<0.05	<0.05	NA	< 0.05	105%	50%	140%	107%	50%	140%	73%	50%	140%
Trichlorofluoromethane	1966591	1966591	<0.05	<0.05	NA	< 0.05	102%	50%	140%	71%	50%	140%	74%	50%	140%
Acetone	1966591	1966591	<0.50	<0.50	NA	< 0.50	81%	50%	140%	97%	50%	140%	100%	50%	140%
1,1-Dichloroethylene	1966591	1966591	<0.05	<0.05	NA	< 0.05	77%	50%	140%	109%	60%	130%	97%	50%	140%
Methylene Chloride	1966591	1966591	<0.05	<0.05	NA	< 0.05	99%	50%	140%	81%	60%	130%	82%	50%	140%
Trans- 1,2-Dichloroethylene	1966591	1966591	<0.05	<0.05	NA	< 0.05	88%	50%	140%	93%	60%	130%	82%	50%	140%
Methyl tert-butyl Ether	1966591	1966591	<0.05	<0.05	NA	< 0.05	78%	50%	140%	80%	60%	130%	76%	50%	140%
1,1-Dichloroethane	1966591	1966591	<0.02	<0.02	NA	< 0.02	96%	50%	140%	90%	60%	130%	83%	50%	140%
Methyl Ethyl Ketone	1966591	1966591	<0.50	<0.50	NA	< 0.50	87%	50%	140%	80%	50%	140%	86%	50%	140%
Cis- 1,2-Dichloroethylene	1966591	1966591	<0.02	<0.02	NA	< 0.02	86%	50%	140%	70%	60%	130%	78%	50%	140%
Chloroform	1966591	1966591	<0.04	<0.04	NA	< 0.04	88%	50%	140%	73%	60%	130%	106%	50%	140%
1,2-Dichloroethane	1966591	1966591	<0.03	<0.03	NA	< 0.03	92%	50%	140%	92%	60%	130%	84%	50%	140%
1,1,1-Trichloroethane	1966591	1966591	<0.05	<0.05	NA	< 0.05	80%	50%	140%	102%	60%	130%	73%	50%	140%
Carbon Tetrachloride	1966591	1966591	<0.05	<0.05	NA	< 0.05	72%	50%	140%	79%	60%	130%	83%	50%	140%

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T700748
PROJECT: BIGC-ENV-349B
ATTENTION TO: Fernando Contento
SAMPLING SITE:
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jan 25, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	1966591	1966591	<0.02	<0.02	NA	< 0.02	84%	50%	140%	85%	60%	130%	70%	50%	140%
1,2-Dichloropropane	1966591	1966591	<0.03	<0.03	NA	< 0.03	75%	50%	140%	83%	60%	130%	79%	50%	140%
Trichloroethylene	1966591	1966591	<0.03	<0.03	NA	< 0.03	84%	50%	140%	90%	60%	130%	70%	50%	140%
Bromodichloromethane	1966591	1966591	<0.05	<0.05	NA	< 0.05	71%	50%	140%	71%	60%	130%	75%	50%	140%
Methyl Isobutyl Ketone	1966591	1966591	<0.50	<0.50	NA	< 0.50	80%	50%	140%	96%	50%	140%	88%	50%	140%
1,1,2-Trichloroethane	1966591	1966591	<0.04	<0.04	NA	< 0.04	99%	50%	140%	94%	60%	130%	105%	50%	140%
Toluene	1966591	1966591	<0.05	<0.05	NA	< 0.05	93%	50%	140%	73%	60%	130%	74%	50%	140%
Dibromochloromethane	1966591	1966591	<0.05	<0.05	NA	< 0.05	75%	50%	140%	79%	60%	130%	74%	50%	140%
Ethylene Dibromide	1966591	1966591	<0.04	<0.04	NA	< 0.04	88%	50%	140%	82%	60%	130%	96%	50%	140%
Tetrachloroethylene	1966591	1966591	<0.05	<0.05	NA	< 0.05	85%	50%	140%	71%	60%	130%	75%	50%	140%
1,1,1,2-Tetrachloroethane	1966591	1966591	<0.04	<0.04	NA	< 0.04	75%	50%	140%	76%	60%	130%	76%	50%	140%
Chlorobenzene	1966591	1966591	<0.05	<0.05	NA	< 0.05	92%	50%	140%	77%	60%	130%	82%	50%	140%
Ethylbenzene	1966591	1966591	<0.05	<0.05	NA	< 0.05	86%	50%	140%	71%	60%	130%	88%	50%	140%
m & p-Xylene	1966591	1966591	<0.05	<0.05	NA	< 0.05	94%	50%	140%	76%	60%	130%	87%	50%	140%
Bromoform	1966591	1966591	<0.05	<0.05	NA	< 0.05	72%	50%	140%	73%	60%	130%	81%	50%	140%
Styrene	1966591	1966591	<0.05	<0.05	NA	< 0.05	81%	50%	140%	84%	60%	130%	83%	50%	140%
1,1,2,2-Tetrachloroethane	1966591	1966591	<0.05	<0.05	NA	< 0.05	109%	50%	140%	109%	60%	130%	118%	50%	140%
o-Xylene	1966591	1966591	<0.05	<0.05	NA	< 0.05	95%	50%	140%	77%	60%	130%	79%	50%	140%
1,3-Dichlorobenzene	1966591	1966591	<0.05	<0.05	NA	< 0.05	98%	50%	140%	83%	60%	130%	92%	50%	140%
1,4-Dichlorobenzene	1966591	1966591	<0.05	<0.05	NA	< 0.05	99%	50%	140%	85%	60%	130%	95%	50%	140%
1,2-Dichlorobenzene	1966591	1966591	<0.05	<0.05	NA	< 0.05	99%	50%	140%	85%	60%	130%	96%	50%	140%
n-Hexane	1966591	1966591	<0.05	<0.05	NA	< 0.05	71%	50%	140%	74%	60%	130%	74%	50%	140%

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

Certified By: N Popowkolof

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T700748

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	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 (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T700748

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5106	Tier 1 Method	BALANCE
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene-d10	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene-d12	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
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
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

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T700748

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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
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

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T700748

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Moisture Content		Tier 1 method	BALANCE

AGAT Laboratories

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 21T700748

Cooler Quantity: 1

Arrival Temperatures: 2.3 | 2.4 | 2.6

Custody Seal Intact: ☑ Yes ☐ No ☐ N/A

Notes: bagged ice

Report Information:

Company: BLK consulting Inc
Contact: Fernando Contento
Address: 5560 Tomken Rd. Unit 12 Mississauga
Phone: 647 966-6894 Fax:
Reports to be sent to:
1. Email: FContento@brownfieldgi.com
2. Email:

Project Information:

Project: BLK - ENV - 349B
Site Location: 227 Cross Av.
Sampled By: TVH
AGAT ID #: 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: BLK Consulting Inc
Contact: Laine Dougherty
Address: 5500 Tomken Rd. Unit 12, Mississauga
Email: LDougherty@brownfieldgi.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 2 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture

Soil Texture (Check One)
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
Indicate One

Is this submission for a **Record of Site Condition**? ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT (Most Analysis) ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs; Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: Total PCBs ☐ Aroclor	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH101-SS1	Jan 13, 2021	9:30 AM/PM	2	S			✓			✓							
BH101-SS2	↓	9:35 AM/PM	3						✓			✓					
BH102-SS1		11:00 AM/PM	2				✓			✓							
BH102-SS2		11:05 AM/PM	3						✓			✓					
BH103-SS1		12:30 AM/PM	2				✓			✓							
BH104-SS1	↓	2:00 AM/PM	2				✓			✓							
BH105-SS1	Jan 14, 2021	10:00 AM/PM	2				✓			✓							
BH105-SS3	↓	10:15 AM/PM	3	↓					✓			✓					

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Travis Van Holst Travis Van Holst	Jan 18, 2021	4:10 pm	Lakshanya		
Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time

'21 JAN 18 4:05PM

Page 1 of 1

N°: T114666

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CLIENT NAME: B.I.G. CONSULTING INC.
12-5500 TOMKEN ROAD
MISSISSAUGA, ON L4W 2Z4
416-214-4880

ATTENTION TO: Fernando Contento

PROJECT: BIGC-ENV-349B

AGAT WORK ORDER: 21T703878

SOIL ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Feb 02, 2021

PAGES (INCLUDING COVER): 19

VERSION*: 1

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

*Notes

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-26

DATE REPORTED: 2021-02-02

SAMPLE DESCRIPTION:				BH106-SS2	BH107-SS1	BH108-SS1	BH109-SS1	BH110-SS1	BH111-SS1	BH112-SS1	BH113-SS1
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2021-01-20 08:45	2021-01-20 10:10	2021-01-20 11:45	2021-01-21 13:30	2021-01-21 09:15	2021-01-21 11:00	2021-01-21 13:00	2021-01-21 15:00
Parameter	Unit	G / S	RDL	2011445	2011446	2011447	2011448	2011449	2011451	2011452	2011454
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	7	6	7	7	7	7	6	10
Barium	µg/g	390	2.0	72.2	99.3	78.2	92.3	46.4	65.6	89.5	109
Beryllium	µg/g	4	0.4	0.6	0.6	0.6	0.6	<0.4	0.4	0.6	0.4
Boron	µg/g	120	5	10	7	8	9	9	10	9	9
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.62	0.37	0.39	0.28	0.29	0.31	0.64	0.57
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	22	23	23	24	10	17	24	19
Cobalt	µg/g	22	0.5	13.6	14.2	14.3	14.0	6.0	9.1	14.6	10.5
Copper	µg/g	140	1.0	188	46.9	37.9	43.3	25.4	47.7	37.4	62.3
Lead	µg/g	120	1	12	13	17	14	19	17	14	47
Molybdenum	µg/g	6.9	0.5	0.7	<0.5	0.5	<0.5	0.9	1.0	<0.5	0.9
Nickel	µg/g	100	1	27	30	29	30	11	21	30	22
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	0.78	0.73	0.80	0.66	0.51	0.77	1.05	0.85
Vanadium	µg/g	86	0.4	29.8	32.6	29.2	33.1	15.1	25.3	31.7	27.0
Zinc	µg/g	340	5	66	68	74	75	77	84	74	96
Chromium, Hexavalent	µg/g	8	0.2	<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	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.402	0.386	0.331	0.362	0.648	0.444	0.267	0.808
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	4.81	4.25	1.83	2.08	1.33	1.99	0.911	1.25
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.93	7.80	7.70	7.76	7.99	7.70	7.67	7.70

Certified By: Iris Verástegui

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-26

DATE REPORTED: 2021-02-02

SAMPLE DESCRIPTION:				BH114-SS1	BH114-SS2	BH115-SS1	BH115-SS2
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2021-01-21 16:00	2021-01-21 16:15	2021-01-22 09:00	2021-01-22 09:15
Parameter	Unit	G / S	RDL	2011456	2011457	2011458	2011459
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	7	6	7	6
Barium	µg/g	390	2.0	85.2	76.5	67.5	62.4
Beryllium	µg/g	4	0.4	0.5	0.5	<0.4	0.6
Boron	µg/g	120	5	8	7	10	8
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.54	0.45	0.54	0.31
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	0.7	<0.5
Chromium	µg/g	160	5	19	21	10	23
Cobalt	µg/g	22	0.5	9.7	12.1	5.8	15.0
Copper	µg/g	140	1.0	70.7	59.7	37.2	34.6
Lead	µg/g	120	1	29	13	34	16
Molybdenum	µg/g	6.9	0.5	0.8	0.7	1.1	<0.5
Nickel	µg/g	100	1	22	26	12	30
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	0.86	0.77	0.80	0.59
Vanadium	µg/g	86	0.4	26.4	31.4	16.6	29.3
Zinc	µg/g	340	5	81	62	238	72
Chromium, Hexavalent	µg/g	8	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
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.319	0.371	1.63	0.248
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.595	0.864	0.332	1.24
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.66	7.60	7.66	7.71

Certified By: Iris Verástegui

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AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-26

DATE REPORTED: 2021-02-02

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

2011445-2011459 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: Iris Verástegui

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Certificate of Analysis

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-26

DATE REPORTED: 2021-02-02

SAMPLE DESCRIPTION:				BH106-SS2	BH107-SS1	BH108-SS1	BH109-SS1	BH110-SS1	BH111-SS1	BH112-SS1	BH113-SS1
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2021-01-20 08:45	2021-01-20 10:10	2021-01-20 11:45	2021-01-21 13:30	2021-01-21 09:15	2021-01-21 11:00	2021-01-21 13:00	2021-01-21 15:00
Parameter	Unit	G / S	RDL	2011445	2011446	2011447	2011448	2011449	2011451	2011452	2011454
Naphthalene	µg/g	0.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	7.9	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<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	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	13.1	11.6	9.8	10.9	6.2	8.4	11.0	10.6
Surrogate	Unit	Acceptable Limits									
Naphthalene-d8	%	50-140		91	80	77	86	85	81	92	85
Acenaphthene-d10	%	50-140		80	82	82	80	79	77	87	79
Chrysene-d12	%	50-140		110	98	100	100	119	110	116	110

Certified By:

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AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-26

DATE REPORTED: 2021-02-02

SAMPLE DESCRIPTION:				BH114-SS1	BH114-SS2	BH115-SS1	BH115-SS2
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2021-01-21 16:00	2021-01-21 16:15	2021-01-22 09:00	2021-01-22 09:15
Parameter	Unit	G / S	RDL	2011456	2011457	2011458	2011459
Naphthalene	µg/g	0.6	0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	7.9	0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.5	0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	8.3	13.7	10.1	13.6
Surrogate	Unit	Acceptable Limits					
Naphthalene-d8	%	50-140		88	79	96	111
Acenaphthene-d10	%	50-140		83	75	93	85
Chrysene-d12	%	50-140		110	100	100	100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

2011445-2011459 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: Pinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-26

DATE REPORTED: 2021-02-02

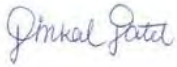
				SAMPLE DESCRIPTION:	BH106-SS1	BH110-SS2	BH112-SS2	BH113-SS2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2021-01-20 08:30	2021-01-21 09:30	2021-01-21 13:15	2021-01-21 15:15
Parameter	Unit	G / S	RDL		2011444	2011450	2011453	2011455
F1 (C6 to C10)	µg/g	55	5		<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10		<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50		<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50		<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50		NA	NA	NA	NA
Moisture Content	%		0.1		11.9	12.0	11.1	11.6
Surrogate	Unit	Acceptable Limits						
Terphenyl	%	60-140			86	82	79	87

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

2011444-2011455 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-26

DATE REPORTED: 2021-02-02

SAMPLE DESCRIPTION:				BH106-SS1	BH110-SS2	BH112-SS2	BH113-SS2
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2021-01-20 08:30	2021-01-21 09:30	2021-01-21 13:15	2021-01-21 15:15
Parameter	Unit	G / S	RDL	2011444	2011450	2011453	2011455
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.47	0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	1.9	0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	1.5	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	2.3	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
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	1.1	0.05	<0.05	<0.05	<0.05	<0.05

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-01-26

DATE REPORTED: 2021-02-02

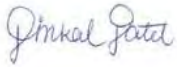
				SAMPLE DESCRIPTION:	BH106-SS1	BH110-SS2	BH112-SS2	BH113-SS2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2021-01-20 08:30	2021-01-21 09:30	2021-01-21 13:15	2021-01-21 15:15
Parameter	Unit	G / S	RDL		2011444	2011450	2011453	2011455
m & p-Xylene	ug/g		0.05		<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.27	0.05		<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	0.7	0.05		<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05		<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05		<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	4.8	0.05		<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.083	0.05		<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.2	0.05		<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	3.1	0.05		<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.04		<0.04	<0.04	<0.04	<0.04
n-Hexane	µg/g	2.8	0.05		<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1		11.9	12.0	11.1	11.6
Surrogate	Unit	Acceptable Limits						
Toluene-d8	% Recovery	50-140			106	105	104	102
4-Bromofluorobenzene	% Recovery	50-140			92	90	91	91

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

2011444-2011455 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



AGAT Laboratories

Guideline Violation

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

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CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
2011445	BH106-SS2	ON T2 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Copper	µg/g	140	188
2011454	BH113-SS1	ON T2 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	0.808
2011458	BH115-SS1	ON T2 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	1.63

AGAT Laboratories

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Feb 02, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	2011458	2011458	<0.8	<0.8	NA	< 0.8	97%	70%	130%	101%	80%	120%	88%	70%	130%
Arsenic	2011458	2011458	7	8	13.3%	< 1	109%	70%	130%	99%	80%	120%	104%	70%	130%
Barium	2011458	2011458	67.5	66.1	2.1%	< 2.0	100%	70%	130%	96%	80%	120%	106%	70%	130%
Beryllium	2011458	2011458	<0.4	<0.4	NA	< 0.4	95%	70%	130%	102%	80%	120%	81%	70%	130%
Boron	2011458	2011458	10	10	NA	< 5	101%	70%	130%	97%	80%	120%	74%	70%	130%
Boron (Hot Water Soluble)	2011458	2011458	0.54	0.58	7.1%	< 0.10	99%	60%	140%	102%	70%	130%	101%	60%	140%
Cadmium	2011458	2011458	0.7	<0.5	NA	< 0.5	104%	70%	130%	98%	80%	120%	94%	70%	130%
Chromium	2011458	2011458	10	10	NA	< 5	97%	70%	130%	98%	80%	120%	100%	70%	130%
Cobalt	2011458	2011458	5.8	5.8	0.0%	< 0.5	95%	70%	130%	100%	80%	120%	100%	70%	130%
Copper	2011458	2011458	37.2	36.8	1.1%	< 1.0	90%	70%	130%	105%	80%	120%	99%	70%	130%
Lead	2011458	2011458	34	37	8.5%	< 1	105%	70%	130%	98%	80%	120%	94%	70%	130%
Molybdenum	2011458	2011458	1.1	1.2	NA	< 0.5	100%	70%	130%	95%	80%	120%	104%	70%	130%
Nickel	2011458	2011458	12	11	8.7%	< 1	95%	70%	130%	102%	80%	120%	93%	70%	130%
Selenium	2011458	2011458	<0.8	<0.8	NA	< 0.8	113%	70%	130%	93%	80%	120%	102%	70%	130%
Silver	2011458	2011458	<0.5	<0.5	NA	< 0.5	94%	70%	130%	106%	80%	120%	91%	70%	130%
Thallium	2011458	2011458	<0.5	<0.5	NA	< 0.5	106%	70%	130%	97%	80%	120%	95%	70%	130%
Uranium	2011458	2011458	0.80	0.85	NA	< 0.50	112%	70%	130%	100%	80%	120%	103%	70%	130%
Vanadium	2011458	2011458	16.6	16.5	0.6%	< 0.4	94%	70%	130%	94%	80%	120%	106%	70%	130%
Zinc	2011458	2011458	238	199	17.8%	< 5	99%	70%	130%	105%	80%	120%	118%	70%	130%
Chromium, Hexavalent	2015817		<0.2	<0.2	NA	< 0.2	93%	70%	130%	96%	80%	120%	94%	70%	130%
Cyanide, Free	2011445	2011445	<0.040	<0.040	NA	< 0.040	92%	70%	130%	92%	80%	120%	97%	70%	130%
Mercury	2011458	2011458	<0.10	<0.10	NA	< 0.10	99%	70%	130%	97%	80%	120%	93%	70%	130%
Electrical Conductivity (2:1)	2023492		0.191	0.191	0.0%	< 0.005	109%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	2011458	2011458	0.332	0.358	7.5%	N/A	NA								
pH, 2:1 CaCl2 Extraction	2011445	2011445	7.93	7.96	0.4%	NA	100%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: Iris Verástegui

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T703878
PROJECT: BIGC-ENV-349B
ATTENTION TO: Fernando Contento
SAMPLING SITE:
SAMPLED BY:

Trace Organics Analysis

RPT Date: Feb 02, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	2011403		<0.05	<0.05	NA	< 0.05	76%	50%	140%	86%	50%	140%	71%	50%	140%
Vinyl Chloride	2011403		<0.02	<0.02	NA	< 0.02	98%	50%	140%	74%	50%	140%	76%	50%	140%
Bromomethane	2011403		<0.05	<0.05	NA	< 0.05	104%	50%	140%	71%	50%	140%	80%	50%	140%
Trichlorofluoromethane	2011403		<0.05	<0.05	NA	< 0.05	98%	50%	140%	83%	50%	140%	73%	50%	140%
Acetone	2011403		<0.50	<0.50	NA	< 0.50	86%	50%	140%	97%	50%	140%	102%	50%	140%
1,1-Dichloroethylene	2011403		<0.05	<0.05	NA	< 0.05	95%	50%	140%	94%	60%	130%	73%	50%	140%
Methylene Chloride	2011403		<0.05	<0.05	NA	< 0.05	107%	50%	140%	97%	60%	130%	99%	50%	140%
Trans- 1,2-Dichloroethylene	2011403		<0.05	<0.05	NA	< 0.05	87%	50%	140%	84%	60%	130%	81%	50%	140%
Methyl tert-butyl Ether	2011403		<0.05	<0.05	NA	< 0.05	118%	50%	140%	116%	60%	130%	118%	50%	140%
1,1-Dichloroethane	2011403		<0.02	<0.02	NA	< 0.02	80%	50%	140%	81%	60%	130%	89%	50%	140%
Methyl Ethyl Ketone	2011403		<0.50	<0.50	NA	< 0.50	95%	50%	140%	99%	50%	140%	85%	50%	140%
Cis- 1,2-Dichloroethylene	2011403		<0.02	<0.02	NA	< 0.02	81%	50%	140%	79%	60%	130%	88%	50%	140%
Chloroform	2011403		<0.04	<0.04	NA	< 0.04	76%	50%	140%	79%	60%	130%	87%	50%	140%
1,2-Dichloroethane	2011403		<0.03	<0.03	NA	< 0.03	79%	50%	140%	76%	60%	130%	92%	50%	140%
1,1,1-Trichloroethane	2011403		<0.05	<0.05	NA	< 0.05	81%	50%	140%	93%	60%	130%	91%	50%	140%
Carbon Tetrachloride	2011403		<0.05	<0.05	NA	< 0.05	72%	50%	140%	74%	60%	130%	73%	50%	140%
Benzene	2011403		<0.02	<0.02	NA	< 0.02	81%	50%	140%	80%	60%	130%	89%	50%	140%
1,2-Dichloropropane	2011403		<0.03	<0.03	NA	< 0.03	84%	50%	140%	84%	60%	130%	93%	50%	140%
Trichloroethylene	2011403		<0.03	<0.03	NA	< 0.03	81%	50%	140%	77%	60%	130%	80%	50%	140%
Bromodichloromethane	2011403		<0.05	<0.05	NA	< 0.05	70%	50%	140%	77%	60%	130%	77%	50%	140%
Methyl Isobutyl Ketone	2011403		<0.50	<0.50	NA	< 0.50	88%	50%	140%	84%	50%	140%	96%	50%	140%
1,1,2-Trichloroethane	2011403		<0.04	<0.04	NA	< 0.04	89%	50%	140%	84%	60%	130%	100%	50%	140%
Toluene	2011403		<0.05	<0.05	NA	< 0.05	80%	50%	140%	71%	60%	130%	75%	50%	140%
Dibromochloromethane	2011403		<0.05	<0.05	NA	< 0.05	81%	50%	140%	74%	60%	130%	79%	50%	140%
Ethylene Dibromide	2011403		<0.04	<0.04	NA	< 0.04	89%	50%	140%	82%	60%	130%	93%	50%	140%
Tetrachloroethylene	2011403		<0.05	<0.05	NA	< 0.05	77%	50%	140%	70%	60%	130%	74%	50%	140%
1,1,1,2-Tetrachloroethane	2011403		<0.04	<0.04	NA	< 0.04	84%	50%	140%	77%	60%	130%	76%	50%	140%
Chlorobenzene	2011403		<0.05	<0.05	NA	< 0.05	76%	50%	140%	71%	60%	130%	76%	50%	140%
Ethylbenzene	2011403		<0.05	<0.05	NA	< 0.05	70%	50%	140%	73%	60%	130%	81%	50%	140%
m & p-Xylene	2011403		<0.05	<0.05	NA	< 0.05	73%	50%	140%	101%	60%	130%	96%	50%	140%
Bromoform	2011403		<0.05	<0.05	NA	< 0.05	80%	50%	140%	79%	60%	130%	81%	50%	140%
Styrene	2011403		<0.05	<0.05	NA	< 0.05	89%	50%	140%	71%	60%	130%	78%	50%	140%
1,1,2,2-Tetrachloroethane	2011403		<0.05	<0.05	NA	< 0.05	103%	50%	140%	88%	60%	130%	106%	50%	140%
o-Xylene	2011403		<0.05	<0.05	NA	< 0.05	76%	50%	140%	76%	60%	130%	74%	50%	140%
1,3-Dichlorobenzene	2011403		<0.05	<0.05	NA	< 0.05	80%	50%	140%	87%	60%	130%	78%	50%	140%
1,4-Dichlorobenzene	2011403		<0.05	<0.05	NA	< 0.05	81%	50%	140%	72%	60%	130%	81%	50%	140%
1,2-Dichlorobenzene	2011403		<0.05	<0.05	NA	< 0.05	85%	50%	140%	72%	60%	130%	78%	50%	140%
n-Hexane	2011403		<0.05	<0.05	NA	< 0.05	113%	50%	140%	103%	60%	130%	74%	50%	140%

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Feb 02, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)															
F1 (C6 to C10)	2011403		< 5	< 5	NA	< 5	89%	60%	140%	111%	60%	140%	110%	60%	140%
F2 (C10 to C16)	2004390		< 10	< 10	NA	< 10	112%	60%	140%	96%	60%	140%	78%	60%	140%
F3 (C16 to C34)	2004390		< 50	< 50	NA	< 50	109%	60%	140%	95%	60%	140%	71%	60%	140%
F4 (C34 to C50)	2004390		< 50	< 50	NA	< 50	101%	60%	140%	87%	60%	140%	82%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	2011449	2011449	<0.05	<0.05	NA	< 0.05	109%	50%	140%	83%	50%	140%	78%	50%	140%
Acenaphthylene	2011449	2011449	<0.05	<0.05	NA	< 0.05	114%	50%	140%	79%	50%	140%	82%	50%	140%
Acenaphthene	2011449	2011449	<0.05	<0.05	NA	< 0.05	114%	50%	140%	82%	50%	140%	81%	50%	140%
Fluorene	2011449	2011449	<0.05	<0.05	NA	< 0.05	99%	50%	140%	81%	50%	140%	75%	50%	140%
Phenanthrene	2011449	2011449	<0.05	<0.05	NA	< 0.05	93%	50%	140%	71%	50%	140%	75%	50%	140%
Anthracene	2011449	2011449	<0.05	<0.05	NA	< 0.05	111%	50%	140%	81%	50%	140%	99%	50%	140%
Fluoranthene	2011449	2011449	<0.05	<0.05	NA	< 0.05	105%	50%	140%	82%	50%	140%	93%	50%	140%
Pyrene	2011449	2011449	<0.05	<0.05	NA	< 0.05	112%	50%	140%	77%	50%	140%	90%	50%	140%
Benz(a)anthracene	2011449	2011449	<0.05	<0.05	NA	< 0.05	111%	50%	140%	76%	50%	140%	106%	50%	140%
Chrysene	2011449	2011449	<0.05	<0.05	NA	< 0.05	102%	50%	140%	99%	50%	140%	105%	50%	140%
Benzo(b)fluoranthene	2011449	2011449	<0.05	<0.05	NA	< 0.05	69%	50%	140%	79%	50%	140%	74%	50%	140%
Benzo(k)fluoranthene	2011449	2011449	<0.05	<0.05	NA	< 0.05	77%	50%	140%	85%	50%	140%	84%	50%	140%
Benzo(a)pyrene	2011449	2011449	<0.05	<0.05	NA	< 0.05	60%	50%	140%	76%	50%	140%	77%	50%	140%
Indeno(1,2,3-cd)pyrene	2011449	2011449	<0.05	<0.05	NA	< 0.05	67%	50%	140%	72%	50%	140%	93%	50%	140%
Dibenz(a,h)anthracene	2011449	2011449	<0.05	<0.05	NA	< 0.05	64%	50%	140%	80%	50%	140%	78%	50%	140%
Benzo(g,h,i)perylene	2011449	2011449	<0.05	<0.05	NA	< 0.05	77%	50%	140%	82%	50%	140%	78%	50%	140%

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

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	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 (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5106	Tier 1 Method	BALANCE
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene-d10	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene-d12	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
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
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

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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
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

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T703878

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
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)

Laboratory Use Only 878
Work Order #: 21T703 ~~878~~
Cooler Quantity: 1 tray
Arrival Temperatures: 1.8 | 1.1 | 1.7
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Free + CE

Report Information:
Company: B.I.G. Consulting Inc.
Contact: Fernando Contento
Address: 5500 Tomken Road, Unit 12, Mississauga, ON
Phone: 6479666894 Fax:
Reports to be sent to:
1. Email: fcontento@brownfieldigi.com
2. Email:

Project Information:
Project: BIGC-ENV-349B
Site Location: Cros Avenue
Sampled By: TVH
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: B.I.G. Consulting Inc.
Contact: Laine Dougherty
Address: 5500 Tomken Road, Unit 12, Mississauga, ON
Email: ldougherty@brownfieldigi.com

Regulatory Requirements:
☐ No Regulatory Requirement
(Please check all applicable boxes)

☑ Regulation 153/04
Table 02 (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

Turnaround Time (TAT) Required:
Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N	Field Filtered - Metals, Hg, CrVI	O. Reg 153: Metals and Inorganics (☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☑ 153 Metals (incl. Hydrides))	ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr6+ ☐ 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						Potentially Hazardous or High Concentration (*/N)
BH106-SS1	20 Jan 2021	08:30	3	S									☑	☑															
BH106-SS2	20 Jan 2021	08:45	2	S				☑								☑													
BH107-SS1	20 Jan 2021	10:10	2	S				☑								☑													
BH108-SS1	20 Jan 2021	11:45	2	S				☑								☑													
BH109-SS1	20 Jan 2021	13:30	2	S				☑								☑													
BH110-SS1	21 Jan 2021	09:15	2	S				☑								☑													
BH110-SS2	21 Jan 2021	09:30	3	S									☑	☑															
BH111-SS1	21 Jan 2021	11:00	2	S				☑								☑													
BH112-SS1	21 Jan 2021	13:00	2	S				☑								☑													
BH112-SS2	21 Jan 2021	13:15	3	S									☑	☑															
BH113-SS1	21 Jan 2021	15:00	2	S				☑								☑													

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time	
Sai S	26/Jan/2021	14:25	NEAC G 28			
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time	Page 1 of 2
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time	N°:

21 JAN 26 2:55 PM

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

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

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: B.I.G. Consulting Inc.
Contact: Fernando Contento
Address: 5500 Tomken Road, Unit 12, Mississauga, ON
Phone: 6479666894 Fax:
Reports to be sent to:
1. Email: fcontento@brownfieldigi.com
2. Email:

Project Information:

Project: BIGC-ENV-349B
Site Location: Cros Avenue
Sampled By: TVI I
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: B.I.G. Consulting Inc.
Contact: Laine Dougherty
Address: 5500 Tomken Road, Unit 12, Mississauga, ON
Email: ldougherty@brownfieldigi.com

Regulatory Requirements:

☐ No Regulatory Requirement

(Please check all applicable boxes)

☑ Regulation 153/04
Table 02 *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

Laboratory Use Only

Work Order #:
Cooler Quantity: See pg 1
Arrival Temperatures:
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes:

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CPM

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics	O. Reg 153: All Metals ☐ / 153 Metals (excl. Hydrides) ☐ / Hydride Metals ☐ / 153 Metals (incl. Hydrides) ☑	O. Reg 153: ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr⁶⁺ ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR	O. Reg 153: Full Metals Scan	O. Reg 153: Regulation/Custom Metals	O. Reg 153: Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	O. Reg 153: Volatiles: ☑ VOC ☐ BTEX ☐ THM	O. Reg 153: PHCs F1 - F4	O. Reg 153: ABNs	O. Reg 153: PAHs	O. Reg 153: PCBs: ☐ Total ☐ Aroclors	O. Reg 153: Organochlorine Pesticides	O. Reg 153: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 153: Sewer Use						Potentially Hazardous or High Concentration (Y/N)
BH113-SS2	21 Jan 2021	15:15	3	S									☑	☑														
BH114-SS1	21 Jan 2021	16:00	2	S			☑									☑												
BH114-SS2	21 Jan 2021	16:15	2	S			☑									☑												
BH115-SS1	22 Jan 2021	09:00	2	S			☑									☑												
BH115-SS2	22 Jan 2021	09:15	2	S			☑									☑												

21 JAN 23 2:53PM

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time	
Sai S	26/Jan/2021	14:25				
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time	Page 2 of 2
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time	N°:

Pink Copy - Client I Yellow Copy - AGAT I White Copy- AGAT

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

CLIENT NAME: B.I.G. CONSULTING INC.
12-5500 TOMKEN ROAD
MISSISSAUGA, ON L4W 2Z4
416-214-4880

ATTENTION TO: Fernando Contento

PROJECT: BIGC-ENV-349B

AGAT WORK ORDER: 21T705007

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Feb 05, 2021

PAGES (INCLUDING COVER): 16

VERSION*: 1

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

*Notes

AGAT Laboratories

5835 COOPERS AVENUE
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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 21T705007

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:Cros Avenue

SAMPLED BY:TVH

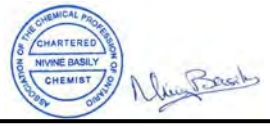
O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-01-28

DATE REPORTED: 2021-02-05

		SAMPLE DESCRIPTION:		DUP011402
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2021-01-21 16:15
Parameter	Unit	G / S	RDL	2020967
Antimony	µg/g	7.5	0.8	<0.8
Arsenic	µg/g	18	1	5
Barium	µg/g	390	2.0	70.6
Beryllium	µg/g	4	0.4	0.5
Boron	µg/g	120	5	10
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.35
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	160	5	19
Cobalt	µg/g	22	0.5	10.2
Copper	µg/g	140	1.0	42.6
Lead	µg/g	120	1	10
Molybdenum	µg/g	6.9	0.5	0.6
Nickel	µg/g	100	1	21
Selenium	µg/g	2.4	0.8	<0.8
Silver	µg/g	20	0.5	<0.5
Thallium	µg/g	1	0.5	<0.5
Uranium	µg/g	23	0.50	0.67
Vanadium	µg/g	86	0.4	30.1
Zinc	µg/g	340	5	53
Chromium, Hexavalent	µg/g	8	0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.300
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.925
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.37

Certified By:



AGAT Laboratories

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FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 21T705007

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:Cros Avenue

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-01-28

DATE REPORTED: 2021-02-05

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

2020967 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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CANADA L4Z 1Y2
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FAX (905)712-5122
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Certificate of Analysis

AGAT WORK ORDER: 21T705007

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:Cros Avenue

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-01-28

DATE REPORTED: 2021-02-05

				SAMPLE DESCRIPTION:	DUP011402
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-01-21 16:15
Parameter	Unit	G / S	RDL		2020967
Naphthalene	µg/g	0.6	0.05		<0.05
Acenaphthylene	µg/g	0.15	0.05		<0.05
Acenaphthene	µg/g	7.9	0.05		<0.05
Fluorene	µg/g	62	0.05		<0.05
Phenanthrene	µg/g	6.2	0.05		<0.05
Anthracene	µg/g	0.67	0.05		<0.05
Fluoranthene	µg/g	0.69	0.05		<0.05
Pyrene	µg/g	78	0.05		<0.05
Benz(a)anthracene	µg/g	0.5	0.05		<0.05
Chrysene	µg/g	7	0.05		<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05		<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05		<0.05
Benzo(a)pyrene	µg/g	0.3	0.05		<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05		<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05		<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05		<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05		<0.05
Moisture Content	%		0.1		14.2
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140			92
Acenaphthene-d10	%	50-140			87
Chrysene-d12	%	50-140			82

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

2020967 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: NPopowkolof

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21T705007

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:Cros Avenue

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-01-28

DATE REPORTED: 2021-02-05

				SAMPLE DESCRIPTION:	DUP011002
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-01-21 09:30
Parameter	Unit	G / S	RDL		2020966
F1 (C6 to C10)	µg/g	55	5		<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5
F2 (C10 to C16)	µg/g	98	10		<10
F3 (C16 to C34)	µg/g	300	50		<50
F4 (C34 to C50)	µg/g	2800	50		<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50		NA
Moisture Content	%		0.1		12.3
Surrogate	Unit	Acceptable Limits			
Terphenyl	%	60-140			115

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

2020966 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21T705007

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:Cros Avenue

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-01-28

DATE REPORTED: 2021-02-05

		SAMPLE DESCRIPTION:		DUP011002
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2021-01-21 09:30
Parameter	Unit	G / S	RDL	2020966
Dichlorodifluoromethane	µg/g	16	0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05
Acetone	ug/g	16	0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05
1,1-Dichloroethane	ug/g	0.47	0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	1.9	0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05
Benzene	ug/g	0.21	0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03
Bromodichloromethane	ug/g	1.5	0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04
Toluene	ug/g	2.3	0.05	<0.05
Dibromochloromethane	ug/g	2.3	0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05
Ethylbenzene	ug/g	1.1	0.05	<0.05

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 21T705007

PROJECT: BIGC-ENV-349B

CLIENT NAME: B.I.G. CONSULTING INC.

ATTENTION TO: Fernando Contento

SAMPLING SITE:Cros Avenue

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-01-28

DATE REPORTED: 2021-02-05

				SAMPLE DESCRIPTION:	DUP011002
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-01-21 09:30
Parameter	Unit	G / S	RDL		2020966
m & p-Xylene	ug/g		0.05		<0.05
Bromoform	ug/g	0.27	0.05		<0.05
Styrene	ug/g	0.7	0.05		<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05		<0.05
o-Xylene	ug/g		0.05		<0.05
1,3-Dichlorobenzene	ug/g	4.8	0.05		<0.05
1,4-Dichlorobenzene	ug/g	0.083	0.05		<0.05
1,2-Dichlorobenzene	ug/g	1.2	0.05		<0.05
Xylenes (Total)	ug/g	3.1	0.05		<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.04		<0.04
n-Hexane	µg/g	2.8	0.05		<0.05
Moisture Content	%		0.1		12.3
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140			104
4-Bromofluorobenzene	% Recovery	50-140			85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
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.

2020966 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkof

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T705007
PROJECT: BIGC-ENV-349B
ATTENTION TO: Fernando Contento
SAMPLING SITE:Cros Avenue
SAMPLED BY:TVH

Soil Analysis

RPT Date: Feb 05, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	2023842		<0.8	<0.8	NA	< 0.8	107%	70%	130%	98%	80%	120%	100%	70%	130%
Arsenic	2023842		9	9	0.0%	< 1	112%	70%	130%	100%	80%	120%	98%	70%	130%
Barium	2023842		51.2	52.2	1.9%	< 2.0	109%	70%	130%	100%	80%	120%	105%	70%	130%
Beryllium	2023842		0.8	0.8	NA	< 0.4	75%	70%	130%	112%	80%	120%	74%	70%	130%
Boron	2023842		11	12	NA	< 5	81%	70%	130%	114%	80%	120%	102%	70%	130%
Boron (Hot Water Soluble)	2028652		0.13	0.13	NA	< 0.10	102%	60%	140%	104%	70%	130%	103%	60%	140%
Cadmium	2023842		<0.5	<0.5	NA	< 0.5	90%	70%	130%	101%	80%	120%	103%	70%	130%
Chromium	2023842		30	30	0.0%	< 5	102%	70%	130%	105%	80%	120%	99%	70%	130%
Cobalt	2023842		22.2	22.2	0.0%	< 0.5	96%	70%	130%	103%	80%	120%	92%	70%	130%
Copper	2023842		36.7	35.8	2.5%	< 1.0	88%	70%	130%	106%	80%	120%	96%	70%	130%
Lead	2023842		5	5	0.0%	< 1	105%	70%	130%	102%	80%	120%	95%	70%	130%
Molybdenum	2023842		<0.5	<0.5	NA	< 0.5	104%	70%	130%	102%	80%	120%	96%	70%	130%
Nickel	2023842		37	36	2.7%	< 1	92%	70%	130%	103%	80%	120%	89%	70%	130%
Selenium	2023842		<0.8	<0.8	NA	< 0.8	138%	70%	130%	102%	80%	120%	98%	70%	130%
Silver	2023842		<0.5	<0.5	NA	< 0.5	99%	70%	130%	101%	80%	120%	97%	70%	130%
Thallium	2023842		<0.5	<0.5	NA	< 0.5	110%	70%	130%	100%	80%	120%	95%	70%	130%
Uranium	2023842		0.65	0.63	NA	< 0.50	109%	70%	130%	104%	80%	120%	102%	70%	130%
Vanadium	2023842		39.6	38.8	2.0%	< 0.4	104%	70%	130%	104%	80%	120%	105%	70%	130%
Zinc	2023842		76	75	1.3%	< 5	100%	70%	130%	110%	80%	120%	115%	70%	130%
Chromium, Hexavalent	2042170		<0.2	<0.2	NA	< 0.2	98%	70%	130%	99%	80%	120%	82%	70%	130%
Cyanide, Free	2036707		<0.040	<0.040	NA	< 0.040	90%	70%	130%	103%	80%	120%	109%	70%	130%
Mercury	2023842		<0.10	<0.10	NA	< 0.10	115%	70%	130%	100%	80%	120%	100%	70%	130%
Electrical Conductivity (2:1)	2023784		0.176	0.180	2.2%	< 0.005	108%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	2023784		1.18	1.15	2.6%	NA									
pH, 2:1 CaCl2 Extraction	2023262		7.22	7.27	0.7%	NA	100%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Certified By:

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T705007
PROJECT: BIGC-ENV-349B
ATTENTION TO: Fernando Contento
SAMPLING SITE:Cros Avenue
SAMPLED BY:TVH

Trace Organics Analysis

RPT Date: Feb 05, 2021

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	2023833		<0.05	<0.05	NA	< 0.05	84%	50%	140%	76%	50%	140%	109%	50%	140%
Vinyl Chloride	2023833		<0.02	<0.02	NA	< 0.02	73%	50%	140%	88%	50%	140%	93%	50%	140%
Bromomethane	2023833		<0.05	<0.05	NA	< 0.05	90%	50%	140%	96%	50%	140%	104%	50%	140%
Trichlorofluoromethane	2023833		<0.05	<0.05	NA	< 0.05	90%	50%	140%	85%	50%	140%	89%	50%	140%
Acetone	2023833		<0.50	<0.50	NA	< 0.50	99%	50%	140%	97%	50%	140%	96%	50%	140%
1,1-Dichloroethylene	2023833		<0.05	<0.05	NA	< 0.05	72%	50%	140%	70%	60%	130%	80%	50%	140%
Methylene Chloride	2023833		<0.05	<0.05	NA	< 0.05	113%	50%	140%	107%	60%	130%	105%	50%	140%
Trans- 1,2-Dichloroethylene	2023833		<0.05	<0.05	NA	< 0.05	91%	50%	140%	87%	60%	130%	83%	50%	140%
Methyl tert-butyl Ether	2023833		<0.05	<0.05	NA	< 0.05	110%	50%	140%	99%	60%	130%	108%	50%	140%
1,1-Dichloroethane	2023833		<0.02	<0.02	NA	< 0.02	89%	50%	140%	86%	60%	130%	91%	50%	140%
Methyl Ethyl Ketone	2023833		<0.50	<0.50	NA	< 0.50	101%	50%	140%	99%	50%	140%	92%	50%	140%
Cis- 1,2-Dichloroethylene	2023833		<0.02	<0.02	NA	< 0.02	90%	50%	140%	82%	60%	130%	89%	50%	140%
Chloroform	2023833		<0.04	<0.04	NA	< 0.04	89%	50%	140%	85%	60%	130%	94%	50%	140%
1,2-Dichloroethane	2023833		<0.03	<0.03	NA	< 0.03	99%	50%	140%	90%	60%	130%	99%	50%	140%
1,1,1-Trichloroethane	2023833		<0.05	<0.05	NA	< 0.05	87%	50%	140%	76%	60%	130%	92%	50%	140%
Carbon Tetrachloride	2023833		<0.05	<0.05	NA	< 0.05	76%	50%	140%	75%	60%	130%	70%	50%	140%
Benzene	2023833		<0.02	<0.02	NA	< 0.02	83%	50%	140%	78%	60%	130%	82%	50%	140%
1,2-Dichloropropane	2023833		<0.03	<0.03	NA	< 0.03	85%	50%	140%	82%	60%	130%	86%	50%	140%
Trichloroethylene	2023833		<0.03	<0.03	NA	< 0.03	74%	50%	140%	71%	60%	130%	81%	50%	140%
Bromodichloromethane	2023833		<0.05	<0.05	NA	< 0.05	75%	50%	140%	76%	60%	130%	78%	50%	140%
Methyl Isobutyl Ketone	2023833		<0.50	<0.50	NA	< 0.50	86%	50%	140%	95%	50%	140%	98%	50%	140%
1,1,2-Trichloroethane	2023833		<0.04	<0.04	NA	< 0.04	103%	50%	140%	99%	60%	130%	99%	50%	140%
Toluene	2023833		<0.05	<0.05	NA	< 0.05	78%	50%	140%	77%	60%	130%	73%	50%	140%
Dibromochloromethane	2023833		<0.05	<0.05	NA	< 0.05	79%	50%	140%	74%	60%	130%	71%	50%	140%
Ethylene Dibromide	2023833		<0.04	<0.04	NA	< 0.04	99%	50%	140%	93%	60%	130%	90%	50%	140%
Tetrachloroethylene	2023833		<0.05	<0.05	NA	< 0.05	77%	50%	140%	76%	60%	130%	80%	50%	140%
1,1,1,2-Tetrachloroethane	2023833		<0.04	<0.04	NA	< 0.04	103%	50%	140%	75%	60%	130%	86%	50%	140%
Chlorobenzene	2023833		<0.05	<0.05	NA	< 0.05	81%	50%	140%	81%	60%	130%	85%	50%	140%
Ethylbenzene	2023833		<0.05	<0.05	NA	< 0.05	85%	50%	140%	72%	60%	130%	79%	50%	140%
m & p-Xylene	2023833		<0.05	<0.05	NA	< 0.05	72%	50%	140%	108%	60%	130%	103%	50%	140%
Bromoform	2023833		<0.05	<0.05	NA	< 0.05	81%	50%	140%	75%	60%	130%	71%	50%	140%
Styrene	2023833		<0.05	<0.05	NA	< 0.05	83%	50%	140%	85%	60%	130%	73%	50%	140%
1,1,2,2-Tetrachloroethane	2023833		<0.05	<0.05	NA	< 0.05	88%	50%	140%	108%	60%	130%	104%	50%	140%
o-Xylene	2023833		<0.05	<0.05	NA	< 0.05	77%	50%	140%	75%	60%	130%	80%	50%	140%
1,3-Dichlorobenzene	2023833		<0.05	<0.05	NA	< 0.05	81%	50%	140%	78%	60%	130%	81%	50%	140%
1,4-Dichlorobenzene	2023833		<0.05	<0.05	NA	< 0.05	87%	50%	140%	79%	60%	130%	87%	50%	140%
1,2-Dichlorobenzene	2023833		<0.05	<0.05	NA	< 0.05	81%	50%	140%	76%	60%	130%	83%	50%	140%
n-Hexane	2023833		<0.05	<0.05	NA	< 0.05	84%	50%	140%	77%	60%	130%	117%	50%	140%

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T705007
PROJECT: BIGC-ENV-349B
ATTENTION TO: Fernando Contento
SAMPLING SITE:Cros Avenue
SAMPLED BY:TVH

Trace Organics Analysis (Continued)

RPT Date: Feb 05, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)															
F1 (C6 to C10)	2023833		< 5	< 5	NA	< 5	99%	60%	140%	110%	60%	140%	95%	60%	140%
F2 (C10 to C16)	2036904		< 10	< 10	NA	< 10	106%	60%	140%	100%	60%	140%	86%	60%	140%
F3 (C16 to C34)	2036904		< 50	< 50	NA	< 50	104%	60%	140%	94%	60%	140%	87%	60%	140%
F4 (C34 to C50)	2036904		< 50	< 50	NA	< 50	92%	60%	140%	114%	60%	140%	91%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	2021830		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	74%	50%	140%	112%	50%	140%
Acenaphthylene	2021830		< 0.05	< 0.05	NA	< 0.05	110%	50%	140%	78%	50%	140%	75%	50%	140%
Acenaphthene	2021830		< 0.05	< 0.05	NA	< 0.05	118%	50%	140%	86%	50%	140%	86%	50%	140%
Fluorene	2021830		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	83%	50%	140%	89%	50%	140%
Phenanthrene	2021830		0.18	0.22	NA	< 0.05	83%	50%	140%	72%	50%	140%	96%	50%	140%
Anthracene	2021830		0.10	0.15	NA	< 0.05	111%	50%	140%	81%	50%	140%	96%	50%	140%
Fluoranthene	2021830		0.36	0.44	NA	< 0.05	115%	50%	140%	75%	50%	140%	85%	50%	140%
Pyrene	2021830		0.29	0.34	NA	< 0.05	110%	50%	140%	75%	50%	140%	89%	50%	140%
Benz(a)anthracene	2021830		0.09	0.10	NA	< 0.05	78%	50%	140%	70%	50%	140%	74%	50%	140%
Chrysene	2021830		0.10	0.11	NA	< 0.05	104%	50%	140%	70%	50%	140%	105%	50%	140%
Benzo(b)fluoranthene	2021830		0.12	0.12	NA	< 0.05	72%	50%	140%	98%	50%	140%	108%	50%	140%
Benzo(k)fluoranthene	2021830		0.10	0.11	NA	< 0.05	87%	50%	140%	85%	50%	140%	100%	50%	140%
Benzo(a)pyrene	2021830		0.06	0.06	NA	< 0.05	68%	50%	140%	75%	50%	140%	88%	50%	140%
Indeno(1,2,3-cd)pyrene	2021830		0.06	0.05	NA	< 0.05	65%	50%	140%	71%	50%	140%	79%	50%	140%
Dibenz(a,h)anthracene	2021830		< 0.05	<0.05	NA	< 0.05	69%	50%	140%	91%	50%	140%	82%	50%	140%
Benzo(g,h,i)perylene	2021830		0.06	0.06	NA	< 0.05	74%	50%	140%	88%	50%	140%	81%	50%	140%

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

Certified By: N Popowkolof

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QA Violation

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T705007

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

RPT Date: Feb 05, 2021

PARAMETER	Sample Id	Sample Description	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
				Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)											
Selenium		DUP011402	138%	70%	130%	102%	80%	120%	98%	70%	130%

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T705007

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:Cros Avenue

SAMPLED BY:TVH

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	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 (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

AGAT Laboratories

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

Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T705007

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:Cros Avenue

SAMPLED BY:TVH

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5106	Tier 1 Method	BALANCE
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene-d10	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene-d12	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
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
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

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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.

AGAT WORK ORDER: 21T705007

PROJECT: BIGC-ENV-349B

ATTENTION TO: Fernando Contento

SAMPLING SITE:Cros Avenue

SAMPLED BY:TVH

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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
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

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AGAT WORK ORDER: 21T705007

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SAMPLING SITE:Cros Avenue

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Moisture Content		Tier 1 method	BALANCE

AGAT Laboratories

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Mississauga, Ontario L4Z 1Y2
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Chain of Custody Record

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

Laboratory Use Only
Work Order #: 21T705007

Cooler Quantity:
Arrival Temperatures: 1.3 | 1.6 | 1.6
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes: Free Free

Report Information:
Company: B.I.G. Consulting Inc.
Contact: Fernando Contento
Address: 5500 Tomken Road, Unit 12, Mississauga, ON
Phone: 6479666894 Fax:
Reports to be sent to:
1. Email: fcontento@brownfieldigi.com
2. Email:

Regulatory Requirements: ☐ No Regulatory Requirement
(Please check all applicable boxes)

☑ Regulation 153/04 — Table 02 (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

Turnaround Time (TAT) Required:
Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
** TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

Project Information:
Project: BIGC-ENV-349B
Site Location: Cros Avenue
Sampled By: TVH
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: B.I.G. Consulting Inc.
Contact: Laine Dougherty
Address: 5500 Tomken Road, Unit 12, Mississauga, ON
Email: ldougherty@brownfieldigi.com

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	Metals and Inorganics: O. Reg 153 — ☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☑ 153 Metals (incl. Hydrides); ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	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	Potentially Hazardous or High Concentration (Y/N)
DUP011002	21Jan 2021	09:30	3	S							☑	☑						
DUP011402	21 Jan 2021	16:15	2	S			☑							☑				

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Sai S	28/Jan/2021	18:30	NEAL G		
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

21 JAN 28 8:57 PM

Page 1 of 1

N°:

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