SUPPLEMENTAL PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

1062 and 1074 Cooke Boulevard, Burlington, Ontario

Client

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Project Number

BIGC-ENV-462B

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Date Submitted

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Executive Summary

B.I.G. Consulting Inc. (BIG) was retained by Camarro Developments Inc. (the Client) to conduct a Supplemental Phase Two Environmental Site Assessment (ESA) on the property located at 1062 and 1074 Cooke Boulevard, Burlington, Ontario (the Site).

This Supplemental 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 Supplemental Phase Two ESA was to assess the areas of potential environmental concern (APECs) identified in the Phase One ESA completed by BIG in June 2021; and, to obtain soil and groundwater data to characterize the Site.

The findings of the Supplemental 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 asphalt underlain by fill material comprised of clayey silt/silty clay, silty sand, and sand with gravel. The fill material is underlain by native material comprised of silty sand till, clayey silt till, and sand. Shale bedrock was encountered at the Site.
2. Grain size analysis was performed on five (5) soil samples submitted from the overburden material. Two (2) samples were found to be medium/fine textured, and three (3) samples were found to be coarse textured. As a result, coarse textured standards were applied as part of this Supplemental Phase Two ESA.
3. The depth to groundwater at monitoring wells screened within the overburden material ranged between 8.71 m and 11.89 m bgs. The depth to groundwater at monitoring wells screened within the bedrock ranged between 9.19 m and 9.97 m bgs.
4. The soil analytical results indicated that select parameters were detected at concentrations above the applicable MECP (2011) Table 3 Site Condition Standards in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional land use and coarse textured soils including:

Parameter	MECP (2011) Table 3 SCS (µg/g)	Number of Soil Samples Submitted	Number of Soil Samples Exceeding the applicable SCS	Maximum concentration detected (µg/g)
PAHs				
Acenaphthylene	0.15	13	1	0.17
Benz(a)anthracene	0.50	13	2	1.17
Benzo(a)pyrene	0.30	13	3	1.35
Benzo(b)fluoranthene	0.78	13	3	1.63
Dibenz(a,h)anthracene	0.10	13	2	0.58
Fluoranthene	0.69	13	2	2.28
Indeno(1,2,3-cd)pyrene	0.38	13	2	0.47

5. It should be noted that the PAH impact is within the vicinity of BH3 and the vertical extent of the impact is approximately 3.05 m bgs. Given the soil impact is localized and within shallow depth, the impacted soil can be excavated and disposed at a landfill during the construction phase.
6. The soil analytical results indicated that EC and SAR were detected at concentrations above the applicable MECP (2011) Table 3 Site Condition Standards in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional land use and coarse textured soils. However, under the newly amended O.Reg.153/04 (O.Reg.407/19) Section 49.1 (1), 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 3 SCS. As de-icing salts are used at the Site for vehicular and pedestrian safety, EC and SAR are not considered contaminants of concern.

7. A total of fifteen (15) soil samples were submitted from across the Site for pH analysis. It is acknowledged that one (1) soil sample had an elevated subsurface soil pH at BH2-SS6 from 3.81-4.42 m bgs. Three (3) additional soil samples were collected within 2 m radius of BH2 (BH2A-SS6, BH2B-SS6, and BH2C-SS6) at a sample depth of 3.81 m to 4.42 m bgs. The pH levels of all four (4) soil samples were averaged following the MECP's guidelines as specified in the "Environmentally Sensitive Areas: pH levels" technical update (MECP 2019). The average pH from the BH2, BH2A, BH2B, and BH2C soil samples is 10.97 which is within the MECP acceptable range for sub-surface soil of 5 to 11.
8. The groundwater analytical results indicated that all parameters were detected below the applicable MECP (2011) Table 3 Site Condition Standards.

Conclusions and Recommendations

As a result of this Phase Two Environmental Site Assessment, no significant environmental impairment with respect to soil or groundwater is expected. No further investigation is required. Upon completion of the minor and localized PAHs impacts in soil, an RSC can be filed with the MECP.

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1 Introduction

B.I.G. Consulting Inc. (BIG) was retained by Camarro Developments Inc. (the Client) to conduct a Supplemental Phase Two Environmental Site Assessment (ESA) on the property located at 1062 and 1074 Cooke Boulevard, Burlington, Ontario (the Site).

This Supplemental 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. It is BIG's understanding that the Phase II ESA is required for refinancing purposes. Contact information for the Client is provided in Section 1.2.

The objective of the Supplemental Phase Two ESA was to assess the areas of potential environmental concern (APECs) identified in the Phase One ESA completed by BIG in June 2021 and, to obtain soil and groundwater data to characterize the Site.

1.1 Site Description

The Site is situated to the west of Cooke Boulevard and south of Masonry Court, in Burlington, Ontario, as shown on Figure 1. For simplicity of this report, Cooke Boulevard is considered running north to south. The Site is irregular in shape and measures approximately 7,100 m^2 in size. The Site is currently occupied by two (2) single storey slab-on-grade industrial/commercial buildings (the Site buildings). The Site buildings have a combined footprint of approximately 2,300 m^2, and the buildings occupy approximately 33 % of the Site. The Site buildings were reportedly constructed in the 1990's. The areas surrounding the Site building are covered with asphalt and landscaping areas.

The Site is bound to the north by Masonry Court followed by residential properties, to the east by Cooke Boulevard followed by an industrial property, to the south by industrial properties, and to the west by commercial and residential properties. The surrounding properties are shown on Figure 3.

1.2 Legal Description and Property Ownership

Refer to the table below for the Site identification information.

Site Details	
Municipal Addresses	1062 and 1074 Cooke Boulevard, Burlington, Ontario
Current Owner	1062 Cooke Blvd Inc. and 1074 Cooke Blvd Inc.
Owner Address	25 Main Street West, Unit 1702, Hamilton, Ontario L8P 1H1
Owner Contact Person	Mr. Kyle Camarro
Legal Description	**1062 Cooke Boulevard**: Parcel 3-1, Section 20M507; Lot 3, Plan 20M507, together with Part 7, 20R8287, As in H331145; Subject to H414356 Burlington **1074 Cooke Boulevard:** Parcel 2-3, Section 20M507; Lot 2, Plan 20M507, Except Part 2, 20R11122; together with Part 7, 20R8287, As in H331145; Subject to H412117, H414356, H571221 Burlington
Property Identification Numbers (PINs)	**1062 Cooke Boulevard**: 07122-0060 (LT) **1074 Cooke Boulevard:** 07122-0059 (LT)
Property Size	7,100 m^2 (0.71 hectares)
Approximate Universal Transverse Mercator (UTM) coordinates	Zone: 17 Easting: 592932.24 Northing: 4795788.25 (1m, NAD83, QGIS)

1.3 Current and Proposed Future Uses

At the time of the Supplemental Phase Two ESA investigation, the Site was zoned for industrial land use. The Site is occupied by two (2) single storey slab-on-grade industrial/commercial buildings.

The future use of the Supplemental Phase Two Property is residential land use. Section 168.3.1 of the *Environmental Protection Act* does not prohibit the proposed future use of the Property. Current surrounding land uses are included on 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 MECP document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act',* ("SGWS" Standards), (MECP, 2011). Tabulated background SCS (Table 1) applicable to environmentally sensitive sites and effects based generic SCS (Tables 2 to 9) applicable to non-environmentally sensitive sites are provided in the SGWS Standards. 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 SGW Standards 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 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional 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 non-potable for the following reasons: the Site is fully serviced by the City of Burlington water distribution system, the 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, the property or one of the properties in the Phase One study area does not have a well-used or intended for use as a source of water for human consumption or agriculture, and all 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.*

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

g) The predominant soil type on the Site was considered to be coarse textured as per the grain size analysis (refer to Appendix F).

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 Energy, Northern Development and Mines (MENDM) website, Bedrock Geology of Ontario, 2011 – MRD 126; and Paleozoic Geology of Southern Ontario, 2007 – MRD 219 (KML format).
d) Ontario MENDM website, Surficial Geology of Southern Ontario, 2010. (KML format).
e) Ontario MENDM website, Physiography of Southern Ontario 2007.

The following information was obtained from these maps:

a) The Site is at an elevation of approximately 103 metres above sea level (m asl). The surrounding properties to the north and west are generally at higher elevations than the Site, while the surrounding properties to the south and east are generally at lower elevations than the Site.
b) No water bodies are located on the Site. The closest surface water body is a tributary of Grindstone Creek, located approximately 270 m north of the Site. Lake Ontario is located approximately 1.1 km south/southeast of the Site. Based on the information, the inferred groundwater flow direction is towards the south/southeast.
c) The bedrock in the general area consists of shale, limestone, dolostone and siltstone and is part of the Queenston Formation.
d) The surficial geology of the Site is mostly described as coarse-textured glaciolacustrine deposits, consisting of sand, gravel, minor silt, clay and littoral deposits; and a small section between 1062 and 1074 Cooke Boulevard is described as shore bluff or scarp.
e) The physiography of the Site is within Iroquois Plain and is characterized as sand plain.

2.2 Past Environmental Investigations

Previous environmental investigations have been conducted at the Site, including a Phase I and Phase II Environmental Site Assessment (ESA), and a Phase One ESA.

The following environmental investigations were reviewed in support of this Phase Two ESA report:

1. Trow (2007) Phase II Environmental Site Assessment, 1062 Cooke Boulevard, Burlington, Ontario. Trow Associates Inc. January 11, 2007.
2. Pinchin (2018) Phase I Environmental Site Assessment, 1062 and 1074 Cooke Boulevard, Burlington, Ontario. Pinchin Ltd. June 14, 2018.
3. BIG (2021) Draft Phase One Environmental Site Assessment, 1062 and 1074 Cooke Boulevard, Burlington, Ontario. B.I.G. Consulting Inc. June 16, 2021.

A brief summary of the investigations is included below:

Trow (2007) Phase II Environmental Site Assessment	
Objective	Investigate soil and groundwater quality at the Site at 1062 Cooke Boulevard.
Program	• Advancement of three (3) boreholes (BH101 to BH103) up to a maximum depth of 7.6 m below ground surface (bgs). • Installation of three (3) monitoring wells (MW101 to MW103). • Soil samples submitted for the analyses of petroleum hydrocarbons (PHCs), benzene, toluene, ethylbenzene and xylenes (BTEX), volatile organic compounds (VOCs), and metals. • Groundwater samples submitted for the analyses of VOCs, and metals.
Site Condition Standards	MECP (2004) Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial/Commercial/Community (ICC) property use with coarse textured soil.
Soil	• The stratigraphy consists of asphalt underlain by fill material comprised of silty clay to clayey silt followed by native silt, silty clay to clayey silt till with intermittent sand layers. • Bedrock was not encountered during the investigation.
Groundwater	• Depth = 4.27 to 7.29 m bgs. (January 3, 2006)
Soil Conditions	• All parameter tested were below the applicable Table 3 SCS in soil.
Groundwater Conditions	• All parameter tested were below the applicable Table 3 SCS in groundwater.

Pinchin (2018) Phase I Environmental Site Assessment	
Objective	Identify former and existing potential environmental concerns at the Site.
Potential Environmental Concerns Identified	• No potential environmental concern was identified at the Site. • Given the year of construction of the Site Buildings (circa 1994), there is a potential for non-friable asbestos-containing materials to be present in the Site buildings.

BIG (2021) Draft Phase One Environmental Site Assessment	
Program	Identify existing or former potential sources of environmental concern.
Areas of Potential Environmental Concern Identified	• Former electronic parts manufacturer at the Site of 1062 Cooke Boulevard. • A print shop at the Site of 1062 Cooke Boulevard. • Former semiconductors, electronic coils, inductors, and electronic components manufacturer at the Site of 1074 Cooke Boulevard. • Former print shop at the Site of 1074 Cooke Boulevard. • A transformer located on-Site. • Usage of de-icing salts on the exterior of Site buildings. • Importation of fill material of unknown quality. • Former semiconductor manufacturer west adjacent to the Site. • Former concrete manufacturer approximately 25 m north of the Site. • Former electronics manufacturer approximately 25 m north of the Site. • Former fuel storage tank approximately 25 m north of the Site.
Recommendations	Complete a Phase Two ESA, including borehole drilling, soil and groundwater sampling, and chemical analysis to further characterize the Site.

3 Scope of the Investigation

3.1 Overview of Site Investigation

The objective of the Supplemental 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 Supplemental 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 fourteen (14) boreholes (BH1 to BH8, BH2A to BH2C, and BH3A to BH3C) at the Site up to a maximum depth of 25.3 meters below ground surface (m bgs);
c) Instrument eight (8) boreholes as monitoring wells (MW1 to MW8);
d) Collect representative soil samples for laboratory chemical analysis of petroleum hydrocarbons (PHCs), benzene, toluene, ethylbenzene and xylenes (BTEX), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbon (PAHs), polychlorinated biphenyls (PCBs), and metals and inorganics.
e) Develop the newly installed groundwater monitoring wells;
f) Collect groundwater levels from the newly installed monitoring wells;
g) Collect groundwater samples from the recently installed monitoring wells for laboratory chemical analysis of PHCs, BTEX, VOCs, PAHs, and 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 Supplemental 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.

The Site is situated to the west of Cooke Boulevard and south of Masonry Court, in Burlington, Ontario, as shown on Figure 1. For simplicity of this report, Cooke Boulevard is considered running north to south. The Site is irregular in shape and measures approximately 7,100 m^2 in size. The Site is currently occupied by two (2) single storey slab-on-grade industrial/commercial buildings (the Site buildings). The Site buildings have a combined footprint of approximately 2,300 m^2, and the buildings occupy approximately 33 % of the Site. The areas surrounding the Site building are covered with asphalt and landscaping areas.

The legal description for 1062 Cooke Boulevard is "Parcel 3-1, Section 20M507; Lot 3, Plan 20M507, together with Part 7, 20R8287, As in H331145; Subject to H414356 Burlington". The legal description for

1074 Cooke Boulevard is "Parcel 2-3, Section 20M507; Lot 2, Plan 20M507, Except Part 2, 20R11122; together with Part 7, 20R8287, As in H331145; Subject to H412117, H414356, H571221 Burlington".

The Property Identification Number (PIN) for 1062 Cooke Boulevard is 07122-0060 (LT) and the PIN for 1074 Cooke Boulevard is 07122-0059 (LT). It should be noted the legal survey plan will be included when finalizing the report.

The approximate Universal Transverse Mercator (UTM) coordinates for the Site centroid was NAD83 17-4795788.25 m N, 592932.24 m E. The UTM coordinates are based on measurements obtained from QGIS. The accuracy of the centroid is estimated to range from 1 m.

Potentially Contaminating Activities

The Phase One ESA conducted by BIG in 2021 inferred that the groundwater flow direction was towards the south/southeast, however the Phase Two ESA determined that the groundwater flow direction at the Site was towards the south/southwest. As such the PCA table has been revised accordingly with off-Site PCAs to the north/east considered to be upgradient to the Site:

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
1.	1062 Cooke Boulevard	Former electronic parts manufacturer (PCA#19 – Electronic and Computer Equipment Manufacturing)	On-Site	Yes	On-Site
2.		Print shop (PCA#31 – Ink Manufacturing, Processing and Bulk Storage)			
3.	1074 Cooke Boulevard	Former semiconductors, electronic coils, inductors, electronic components manufacturer (PCA#19 – Electronic and Computer Equipment Manufacturing)	On-Site	Yes	On-Site
4.		Former print shop (PCA#31 – Ink Manufacturing, Processing and Bulk Storage)			
5.	1062 and 1074 Cooke Boulevard	Transformer (PCA#55 – Transformer Manufacturing, Processing and Use)	On-Site	Yes	On-Site
6.		De-icing salts usage (PCA"Other" – Usage of De-icing Salts)			
7.		Importation of fill material (PCA#30 – Importation of Fill Material of Unknown Quality)			
8.	1047 Cooke Boulevard	Former and current semiconductor and other electronic component manufacturer (PCA#19 – Electronic and Computer Equipment Manufacturing)	Off-Site (20 m east)	Yes	Located close proximity and upgradient

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
9.	101 Masonry Court (currently consists of 1095, 1120 and 1121 Cooke Boulevard)	Former concrete manufacturer (PCA#12 – Concrete, Cement and Lime Manufacturing)	Off-Site (25 m north)	Yes	Located upgradient
10.		Former electronics manufacturer (PCA#19 – Electronic and Computer Equipment Manufacturing)			
11.		Former fuel storage tank (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
12.	1050 Cooke Boulevard	Former semiconductor and other electronic component manufacturer (PCA#19 – Electronic and Computer Equipment Manufacturing)	Off-Site (south adjacent)	No	Located downgradient
13.		Former other plastic product manufacturer (PCA#43 – Plastics (including Fibreglass) Manufacturing and Processing)			
14.	2 Masonry Court	Former semiconductor manufacturer (PCA#19 – Electronic and Computer Equipment Manufacturing)	Off-Site (west adjacent)	No	Inferred trans-gradient
15.	1038 Cooke Boulevard	Former other miscellaneous chemical product manufacturer (PCA#8 – Chemical Manufacturing, Processing and Bulk Storage)	Off-Site (45 m south)	No	Located downgradient
16.	1060 Waterdown Road	Former concrete manufacturer (PCA#12 – Concrete, Cement and Lime Manufacturing)	Off-Site (85 m west)	No	Inferred trans-gradient t
17.	1025 Waterdown Road	Former dry cleaner (PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used))	Off-Site (110 m south)	No	Located downgradient
18.	1021 Waterdown Road	Commercial print shop (PCA#31 – Ink Manufacturing, Processing and Bulk Storage)	Off-Site (125 m south)	No	Located downgradient
19.	35 Plains Road East	Former service station (PCA#10 – Commercial Autobody Shops)	Off-Site (135 m south)	No	Located downgradient
20.		Former garage (PCA#27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles, and Aviation Vehicles)			
21.		Former service station (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
22.	1022 Waterdown Road	Former dry cleaner (PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used))	Off-Site (150 m southwest)	No	Located downgradient
23.	5 Plains Road East (currently 1 Plains Road East)	Former dry cleaner (PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used))	Off-Site (165 m southwest)	No	Located downgradient
24.	71 Plains Road East	Former auto service (PCA#10 – Commercial Autobody Shops)	Off-Site (170 m southeast)	No	Inferred trans-gradient
25.		Former UST (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
26.	7 Plains Road West	Former auto service (PCA#10 – Commercial Autobody Shops)	Off-Site (195 m southwest)	No	Located downgradient
27.		Former USTs (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
28.	29 Plains Road West	Former UST (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (205 m southwest)	No	Located downgradient
29.	1140 and 1150 Waterdown Road	Former trucking and freight (PCA#11 – Commercial Trucking and Container Terminals)	Off-Site (220 m northwest)	No	Inferred trans-gradient
30.		Former equipment rental/repair shop (PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems)			
31.		Former dump disposal (PCA#58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners)			
32.	91 Plains Road East	Former retail fuel tank (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (230 m southeast)	No	Inferred trans-gradient
33.	14 Plains Road East	Former auto service (PCA#10 – Commercial Autobody Shops)	Off-Site (235 m south)	No	Located downgradient

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
34.		Former USTs (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
35.	20 Plains Road East	Former dry cleaner (PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used))	Off-Site (235 m south)	No	Located downgradient

(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 eleven (11) PCAs are considered APECs at the Site. Further discussion is provided below.

Areas of Potential Environmental Concern

Based on the evaluation of PCAs located on- and off-Site, eleven (11) APECs were identified, as presented below:

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	PCA Details	Location of PCA (On-Site or Off-Site)	Contaminants of Concern	Media Potentially Impacted (Groundwater, soil and/or Sediment)
APEC 1: Former electronic parts manufacturer	Southern portion	#19 – Electronic and Computer Equipment Manufacturing	COCs used during the manufacturing process could have leaked to the ground surface	On-Site	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil and Groundwater
APEC 2: Print shop	Southern portion	#31 – Ink, Manufacturing, Processing and Bulk Storage	COCs used during the operation of the print shop could have leaked to the ground surface.	On-Site	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil and Groundwater
APEC 3: Former semiconductor, electronic coils, inductors, electronic components manufacturer	Northern portion	#19 – Electronic and Computer Equipment Manufacturing	COCs used during the manufacturing process could have leaked to the ground surface	On-Site	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil and Groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	PCA Details	Location of PCA (On-Site or Off-Site)	Contaminants of Concern	Media Potentially Impacted (Groundwater, soil and/or Sediment)
APEC 4: Former print shop	Northern portion	#31 – Ink Manufacturing, Processing and Bulk Storage	COCs used during the operation of the former print shop could have leaked to the ground surface	On-Site	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil and Groundwater
APEC 5: Transformer	West-central portion	#55 – Transformer Manufacturing, Processing and Use	The transformer located on-Site could have leaked	On-Site	PCBs	Soil
APEC 6: De-icing salt usage	Exterior of Site buildings	"Other" – Usage of de-icing salt	De-icing salts are used on the exterior portions of the Site for vehicular and pedestrian safety	On-Site	Electrical Conductivity, SAR, Na, Cl-	Soil and Groundwater
APEC 7: Importation of fill material	Entire Site	#30 – Importation of Fill Material of Unknown Quality	Fill material is related to re-grading that occurred at the Site	On-Site	PAHs, metals, As, Sb, Se, B-HWS, Cr (VI), Hg, CN-	Soil and Groundwater
APEC 8: Semiconductor and other electronic component manufacturer	Eastern portion	#19 – Electronic and Computer Equipment Manufacturing	COCs used during the manufacturing process could have leaked to the ground surface	Off-Site (20 m east)	VOCs, metals, As, Sb, Se, Cr (VI), Hg, CN-	Groundwater
APEC 9: Former concrete manufacturer	Northern portion	#12 – Concrete, Cement and Lime Manufacturing	COCs used during the manufacturing process could have leaked to the ground surface	Off-Site (25 m north)	VOCs, metals, As, Sb, Se, Cr (VI), Hg, CN-	Groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	PCA Details	Location of PCA (On-Site or Off-Site)	Contaminants of Concern	Media Potentially Impacted (Groundwater, soil and/or Sediment)
APEC 10: Former electronics manufacturer	Northern portion	#19 – Electronic and Computer Equipment Manufacturing	COCs used during the manufacturing process could have leaked to the ground surface	Off-Site (25 m norther	VOCs, metals, As, Sb, Se, Cr (VI), Hg, CN-	Groundwater
APEC 11: Former fuel storage tank	Northern portion	#28 – Gasoline and Associated Products Storage in Fixed Tanks	The former off-Site fuel storage tank could have leaked	Off-Site	PHCs and BTEX	Groundwater

(1) Areas of potential environmental concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment including through,
   a. Identification of past or present uses on, in or under the phase one property and,
   b. Identification of potentially contaminating 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 xylenes; VOCs = volatile organic compounds; PAHs = polycyclic aromatic hydrocarbons; PCBs = polychlorinated biphenyls; As = arsenic; Sb = antimony; Se = selenium; B-HWS = boron (hot water soluble); Cr (VI) = chromium hexavalent; Hg = mercury; CN- = cyanide; SAR = sodium adsorption ratio; Na = sodium; Cl- = chloride

The physiography of the Site is within the Iroquois Plain and is characterized as sand plain. The surficial geology of the Site is mostly described as coarse-textured glaciolacustrine deposits, consisting of sand, gravel, minor silt, clay and littoral deposits; and a small section between 1062 and 1074 Cooke Boulevard is described as shore bluff or scarp. The bedrock in the general area consists of shale, limestone, dolostone and siltstone and is part of the Queenston Formation.

Based on the review of the OBM and Toporama map, the Site is at an elevation of approximately 103 metres above sea level (m asl). The surrounding properties to north and west are generally at higher elevations than the Site, and the surrounding properties to the south and east are generally at lower elevations than the Site.

No water bodies are located on the Site. A tributary of Grindstone Creek is situated approximately 270 m north of the Site, and Lake Ontario is situated approximately 1.1 km south/southeast of the Site. Based on the information, the inferred groundwater flow direction is towards the south/southeast.

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

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
Sanitary Sewer	Municipality – City of Burlington	East	A manhole was observed in the east-central portion of the Site. A sanitary sewer line is anticipated to enter the Site from the eastern Site boundary.
Storm Sewer	Municipality – City of Burlington	East	Three (3) catch basins were observed at the Site. A storm sewer line is anticipated to enter the Site from the eastern Site boundary.
Natural Gas	Enbridge Gas	East	Given that the Site is located in a mixed residential and industrial area, the natural gas lines are anticipated to run along Cooke Boulevard.
Electricity	Burlington Hydro	West	A transformer is located between the two (2) Site buildings. The hydro line is anticipated to enter the Site buildings from the southwest corner and the northwest corner of the Site buildings, respectively.

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 fourteen (14) 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 May 26 and June 2 and June 25, 2021.

The boreholes were advanced by Canadian Soil Drilling under full-time supervision of BIG staff using a truck-mount power probe to a maximum depth of 25.3 m bgs to sufficiently assess the APECs identified in the Phase One ESA. Rock coring was completed at BH4, and BH7 to a maximum depth of 25.3 m bgs. 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 samplers advanced into the subsurface using a truck mounted power probe. 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 times 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. Eight (8) of the boreholes that were advanced were instrumented with monitoring wells (MW1 to MW8).

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 details of the soil cores recovered from the boreholes advanced at the Site are provided in boreholes logs presented in Appendix C.

Five (5) duplicate soil samples were collected for QA/QC purposes as summarized below.

Borehole	Duplicate Sample I.D.	Analytical Test Group
BH1-SS1	DUP01010	PCBs
BH1-SS2	DUP01020	PAHs
BH4-SS8	DUP04070	Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR
BH6-SS2	DUP06020	PHCs, BTEX
BH6-SS8	DUP06080	BTEX, VOCs

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

Eight (8) boreholes were instrumented with groundwater monitoring wells at the Site (MW1 to MW8). 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 height 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;
d) Cleaning of augers between sampling locations; and,
e) The use of hollow stem augers to prevent loose and potentially contaminated material in overlying layers from sloughing into the boreholes and coming into contact with groundwater.

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 June 10, 2021 using dedicated Waterra® tubing and a monsoon 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 could be collected. These groundwater monitoring activities were conducted on June 10 and 25, 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) wetted well volumes of water, or until dry, 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 Hanna HI 9829 multiparameter water quality meter.

4.10 Groundwater Sampling

Upon completion of purging, the newly installed monitoring wells MW2 to MW8 were purged and sampled on June 11, 2021. Monitoring well MW7 was re-sampled on June 29, 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.

4.11 Sediment Sampling

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

4.12 Analytical Testing

Analytical testing was performed by AGAT, which is an accredited laboratory under the Standards Council of Canada/Canadian Association of Environmental Analytical Laboratories (Accredited Laboratory No. A3200) in accordance with ISO/IEC 17025:2017 - "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
BH1-SS1	APEC 5 characterization	PCBs	BIG
BH1-SS2	APEC 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH1-SS6	APEC 7 and Site characterization	BTEX, VOCs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH2-SS2	APEC 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH2-SS6	APEC 7 characterization	PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH2A-SS6	Site characterization	pH	BIG
BH2B-SS6	Site characterization	pH	BIG
BH2C-SS6	Site characterization	pH	BIG
BH3-SS2	APEC 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH3-SS5	Vertical delineation	PAHs	BIG
BH3A-SS2	APEC 7 characterization	PAHs	BIG
BH3B-SS2	APEC 7 characterization	PAHs	BIG
BH3C-SS2	APEC 7 characterization	PAHs	BIG

Soil Sample ID	Rationale	Requested Analyses	Consultant
BH4-SS2	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH4-SS6	APECs 6 and 7 characterization	PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH4-SS8	APECs 6, 7 and Site characterization	BTEX, VOCs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH5-SS3	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH6-SS2	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH6-SS8	APECs 6, 7 and Site characterization	BTEX, VOCs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH7-SS2	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH7-SS5	APECs 6, 7 and Site characterization	BTEX, VOCs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH8-SS3	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH8-SS7	APECs 6, 7 and Site characterization	BTEX, VOCs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG

4.12.2 Groundwater Sampling

Representative groundwater samples were submitted for specific chemical analysis based on the identified contaminants of concern. The representative groundwater samples selected for lab analysis, the rationale for each sample, and the required analyses are summarized below.

Table 3: Summary of Groundwater Samples Submitted for Chemical Analyses

Monitoring Well ID	Rationale	Requested Analyses	Consultant
MW2	APECs 7-11 characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride	BIG
MW3	APECs 7 and 9-11 characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride	BIG
MW4	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride	BIG
MW5	APEC 8 characterization	VOCs	BIG
MW6	APEC 8 characterization	VOCs	BIG
MW7	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride	BIG
MW8	APECs 6, 7 and characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride	BIG

4.13 Elevation Survey

An elevation survey was conducted to obtain vertical control of the newly installed borehole and monitoring well locations. The ground surface elevations of each newly installed monitoring well location was surveyed relative to a water-valve located on the northeast adjacent property boundary at 35 Plains Road East, Burlington, Ontario. The water-valve was included as part of a geodetic survey completed for the adjacent property at 35 Plains Road East by Rady-Pentek & Edward Survey Ltd. The elevation of the water valve was 100.37 m asl. A summary of groundwater levels and elevations is provided below.

Table 4: Summary of Groundwater Levels and Elevations

Monitoring Well ID	Ground Surface Elevation	Groundwater Level (m bgs)	Groundwater Elevation (m asl)	Groundwater Monitoring Date
BH/MW1	103.48	DRY	DRY	June 10, 2021
BH/MW2	104.11	10.91	93.20	June 10, 2021
BH/MW3	104.41	11.89	92.52	June 10, 2021
BH3A	104.41	-	-	-
BH3B	104.41	-	-	-
BH3C	104.41	-	-	-
BH/MW4	103.72	9.97	93.75	June 10, 2021
BH/MW5	102.64	10.13	95.51	June 10, 2021
BH/MW6	101.22	8.71	92.51	June 10, 2021
BH/MW7	101.41	9.19	92.22	June 10, 2021
		9.14	92.27	June 25, 2021
BH/MW8	102.42	9.95	92.47	June 10, 2021

The elevation survey was completed using BIG's own Sokkia B40. The survey equipment was calibrated by BIG personnel prior to use.

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 PHC F1, PHC F2, BTEX, and VOCs were inspected for the presence of gas bubbles and the presence of head

space, where volatiles may partition into.

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

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

Field QA/QC samples were collected during the soil and groundwater sampling. Duplicate samples were collected to evaluate sampling precision and trip blanks were included to evaluate the potential for sample cross-contamination during handling and transport.

Five (5) duplicate soil samples were collected for QA/QC purposes as summarized below.

Borehole	Duplicate Sample I.D.	Analytical Test Group
BH1-SS1	DUP01010	PCBs
BH1-SS2	DUP01020	PAHs
BH4-SS8	DUP04070	Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR
BH6-SS2	DUP06020	PHCs, BTEX
BH6-SS8	DUP06080	BTEX, VOCs

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

Monitoring Well	Duplicate Sample I.D.	Analytical Test Group
MW3	DUP30	PHCs, BTEX, VOCs, PAHs, metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride

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 fourteen (14) boreholes into the surficial topsoil and the underlying native materials up to a maximum depth of 25.3 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 underlain by fill material comprised of clayey silt/silty clay, silty sand, and sand with gravel. The fill material is underlain by native material comprised of silty sand till, clayey silt till, and sand. Shale bedrock was encountered at the Site.

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 8A).

5.1.1 Surficial Material

An asphalt layer was encountered at all borehole locations and ranged in thickness from 50 mm to 100 mm. The asphalt was underlain by granular material which ranged in thickness from 150 mm to 250 mm.

5.1.2 Fill Material

Fill material comprised of clayey silt/silty clay, silty sand, and sand with gravel was encountered in all boreholes and extended to depths varying between 0.3 and 6.1 m bgs. The fill material also contained occasional cobble and boulders, pieces of concrete and bricks, asphalt fragments etc. A 0.6 m thick layer of light weight concrete was also encountered from 4.6 to 5.2 m bgs at BH/MW2.

5.1.3 Native Material

Silty sand till

Below existing fill in boreholes BH/MW1 and BH/MW3, a glacial deposit of native silty sand till was encountered that extended to the depths varying between 6.1 to 7.6 m bgs. The silty sand till also contained trace clay to some clay, and trace gravel.

Upper Clayey silt/Silty clay till

Below the existing fill in boreholes BH/MW2, BH/MW4, BH/MW5, BH/MW6, BH/MW7 and BH/MW8, and below the sandy silt till in borehole BH/MW3, another native deposit of upper clayey silt/silty clay till was encountered that extended to depths varying between 4.6 to 10.7 m bgs. The clayey silt till deposit also contained trace sand and trace gravel.

Sand

Below silty sand till in borehole BH/MW1 and below the upper clayey silt/silty clay till in boreholes BH/MW2 to BH/MW8, a cohesionless deposit of sand was encountered that extended to depths varying between 6.7 and 12.5 m bgs. The sand deposit also contained trace silt and trace gravel.

Lower Clayey silt/Silty clay till

Below the sand deposit at BH/MW2 to BH/MW8, another glacial deposit of native clayey silt/silty clay till was encountered that extended to depths varying between 15.5 and 18.3 m bgs. This lower deposit also contained trace to some sand and trace gravel. Occasional fragments of shale were also encountered within this deposit.

5.1.4 Bedrock

Bedrock was encountered at the Site at BH/MW2, BH/MW4, and BH/MW7. The bedrock was comprised of highly weathered shale and extended to depths varying between 19.8 to 25.3 m bgs, which was the maximum depth investigated at the Site.

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

5.2 Groundwater Elevations and Flow Direction

The monitoring well network advanced at the Site consists of six (6) monitoring wells screened within the overburden material and two (2) wells screened within bedrock. The 3 m long screens were installed within the silty clay/clayey silt till, sand, or bedrock to intercept the overburden groundwater aquifer.

Based on the topography and the distance of the Site to Lake Ontario, the inferred groundwater flow direction was considered to be to the south/southeast in the Phase One ESA. The groundwater data collected from across the Site indicated that the groundwater flow direction is to the south/southwest.

5.2.1 Groundwater: Hydraulic Gradients

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

$$i = Ah/As$$

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 June 10, 2021 was 0.001 m/m between BH/MW5 and BH/MW8 and 0.007 m/m between BH/MW2 and BH/MW8 with a geomean of 0.002 m/m.

It is noted that vertical hydraulic gradients could not be determined at this time.

5.2.2 Groundwater: Hydraulic Conductivity

Hydraulic conductivity testing was completed by BIG. Single Well Response Test (SWRT) analysis was conducted at selected monitoring wells (MW2, and MW4 to MW8). The hydraulic conductivity values for each of the tested wells were calculated from the SWRT using Aqtesolv Software and the Hvorlsev solution for unconfined conditions. They hydraulic conductivity (K) ranged from 6.65 $x10^{-8}$ to 1.15 x 10^{-4} m/s, with a geometric mean of 2.86 x 10^{-6} m/s.

5.3 Soil Texture

The native materials encountered at the Site are comprised of silty sand till, clay silt/silty clay till, and sand. Grain size analysis was performed on five (5) soil samples submitted from the overburden material. Two (2) samples were found to be medium/fine textured, and three (3) samples were found to be coarse

textured. As a result, coarse textured standards were applied as part of this Supplemental Phase Two ESA. The grain size distribution curves are provided in Appendix F.

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

5.5.1 PHCs

The soil samples submitted for PHCs analysis indicated that all parameters were detected below the applicable MECP Table 3 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Table B.1 for a summary of the soil results analyzed for PHCs.

5.5.2 BTEX

The soil samples submitted for BTEX analysis indicated that all parameters were detected below the applicable MECP Table 3 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Table B.2 for a summary of the soil results analyzed for BTEX.

5.5.3 VOCs

The soil samples submitted for VOCs analysis indicated that all parameters were detected below the applicable MECP Table 3 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Table B.2 for a summary of the soil results analyzed for VOCs.

5.5.4 PAHs

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

Parameter	MECP (2011) Table 3 SCS (µg/g)	Number of Soil Samples Submitted	Number of Soil Samples Exceeding the applicable SCS	Maximum concentration detected (µg/g)
PAHs				
Acenaphthylene	0.15	13	1	0.17
Benz(a)anthracene	0.50	13	2	1.17
Benzo(a)pyrene	0.30	13	3	1.35
Benzo(b)fluoranthene	0.78	13	3	1.63
Dibenz(a,h)anthracene	0.10	13	2	0.58
Fluoranthene	0.69	13	2	2.28
Indeno(1,2,3-cd)pyrene	0.38	13	2	0.47

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

It should be noted that the PAH impact is within the vicinity of BH3 and the vertical extent of the impact is approximately 3.05 m bgs. Given the soil impact is localized and within shallow depth, the impacted soil can be excavated and disposed at a landfill during the construction phase.

Refer to Table B.3 for a summary of the soil results analyzed for PAHs.

5.5.5 PCBs

The soil samples submitted for PCBs analysis indicated that all parameters were detected below the applicable Table 3 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Table B.4 for a summary of the soil results analyzed for PBCs.

5.5.6 Metals

The soil samples submitted for metals (including As, Sb, Se, B-HWS, Cr(VI), Hg, CN-) analysis indicated that all parameters were detected below the applicable Table 3 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Table B.5 for a summary of the soil results analyzed for metals.

5.5.7 Inorganics

The soil samples submitted for inorganic analysis indicated that EC was detected at concentrations above the applicable MECP Table 3 SCS at eight (8) borehole locations and SAR was detected at concentrations above the applicable MECP Table 3 SCS at seven (7) borehole locations. However, under the newly amended O.Reg.153/04 (O.Reg.407/19) Section 49.1 (1), 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 3 SCS. As de-icing salts are used at the Site for vehicular and pedestrian safety, EC and SAR are not considered a contaminant of concern.

A total of fifteen (15) soil samples were submitted from across the Site for pH analysis. It is acknowledged that one (1) soil sample had an elevated subsurface soil pH at BH2-SS6 from 3.81-4.42 m bgs. Three (3) additional soil samples were collected within 2 m radius of BH2 (BH2A-SS6, BH2B-SS6, and BH2C-SS6) at a sample depth of 3.81 m to 4.42 m bgs. The pH levels of all four (4) soil samples were averaged following the MECP's guidelines as specified in the "Environmentally Sensitive Areas: pH levels" technical update (MECP 2019). The average pH from the BH2, BH2A, BH2B, and BH2C soil samples is 10.97 which is within the MECP acceptable range for sub-surface soil of 5 to 11.

Refer to Table B.5 for a summary of the soil results analyzed for inorganics.

5.5.8 Chemical Transformation and Soil Contaminant Sources

Select PAHs were identified in soil at concentrations in exceedance of the applicable MECP Table 3 SCS. However, given the nature of the compounds it is not expected that any chemical transformations (i.e., presence of parent compounds and daughter products) has occurred on the Site. Further assessment would need to be conducted to assess whether any natural attenuation processes have occurred.

5.5.9 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 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 5.6.8).

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 E.

5.6.1 PHCs

Groundwater samples submitted for PHCs analysis indicated that all parameters were detected below the applicable MECP Table 3 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Table B.6 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 3 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Table B.7 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 3 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Table B.7 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 3 SCS; and all laboratory RDLs were below the applicable SCS.

Refer to Table B.8 for a summary of the groundwater results analyzed for PAHs.

5.6.5 Metals

Groundwater samples submitted for metals (including As, Sb, Se, Cr(VI), Hg, CN-) analysis indicated that selenium exceeded the applicable MECP Table 3 SCS in one (1) groundwater sample at MW7. However, this monitoring well was re-sampled on June 29, 2021 and analytical results indicated that selenium was non-detect. Based on the analytical results of the re-sampling event, the initial selenium exceedance detected is considered an anomaly, and is most likely attributed to sediment in the sample. Therefore, selenium is not considered a contaminant of concern.

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

Refer to Table B.9 for a summary of the soil results analyzed for metals.

5.6.6 Sodium and Chloride

Groundwater samples submitted for sodium and chloride analysis indicated that sodium and chloride were detected in groundwater at one (1) monitoring well MW7 in exceedance of the applicable MECP Table 3 SCS. However, this monitoring well was re-sampled on June 29, 2021 and analytical results indicated that sodium and chloride were detected below the applicable MECP Table 3 SCS.

Refer to Table B.9 for a summary of the groundwater results analyzed for sodium and chloride.

5.6.7 Chemical Transformation and Contaminant Sources

As no COCs were detected in groundwater at the Site, chemical transformations do not need to be considered further.

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 Supplemental 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 (MECP 2011b). 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.

Five (5) duplicate soil samples were collected for QA/QC purposes as summarized below.

Borehole	Duplicate Sample I.D.	Analytical Test Group
BH1-SS1	DUP01010	PCBs
BH1-SS2	DUP01020	PAHs
BH4-SS8	DUP04070	Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR
BH6-SS2	DUP06020	PHCs, BTEX
BH6-SS8	DUP06080	BTEX, VOCs

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

Monitoring Well	Duplicate Sample I.D.	Analytical Test Group
MW3	DUP30	PHCs, BTEX, VOCs, PAHs, metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride

The field duplicate sample results were quantitatively evaluated by calculating the relative percent difference (RPDs). Assessment of the duplicate soil and groundwater samples, where quantifiable, showed that the results met analytical test group specific acceptance criteria as specified in the MECP Protocol

document (MECP 2011b), with the exception of electrical conductivity at BH4-SS8. Electrical conductivity exceeded the soil RPD criteria of ≤10% for soils. However, the RPD exceedance identified is likely due to the heterogenous nature of soil at the Site. 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 was AGAT Laboratories (AGAT). AGAT is accredited by the Standards Council of Canada/Canadian Association for Laboratory Accreditation (Accredited Laboratory No. A3200), in accordance with ISO/IEC 17025:2017 - "General Requirements for the Competence of Testing and Calibration Laboratories" for the analysis of all parameters for all samples in the scope of work for which SCS have been established under O.Reg.153/04.

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 results, the analytical results reported by AGAT are of acceptable quality and data qualifications are not required.

6 Summary of Findings

The findings of the Supplemental 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 asphalt underlain by fill material comprised of clayey silt/silty clay, silty sand, and sand with gravel. The fill material is underlain by native material comprised of silty sand till, clayey silt till, and sand. Shale bedrock was encountered at the Site.
2. Grain size analysis was performed on five (5) soil samples submitted from the overburden material. Two (2) samples were found to be medium/fine textured, and three (3) samples were found to be coarse textured. As a result, coarse textured standards were applied as part of this Phase Two ESA.
3. The depth to groundwater at monitoring wells screened within the overburden material ranged between 8.71 m and 11.89 m bgs. The depth to groundwater at monitoring wells screened within the bedrock ranged between 9.19 m and 9.97 m bgs.
4. The soil analytical results indicated that select parameters were detected at concentrations above the applicable MECP (2011) Table 3 Site Condition Standards in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional land use and coarse textured soils including:

Parameter	MECP (2011) Table 3 SCS (µg/g)	Number of Soil Samples Submitted	Number of Soil Samples Exceeding the applicable SCS	Maximum concentration detected (µg/g)
PAHs				
Acenaphthylene	0.15	13	1	0.17
Benz(a)anthracene	0.50	13	2	1.17
Benzo(a)pyrene	0.30	13	3	1.35
Benzo(b)fluoranthene	0.78	13	3	1.63
Dibenz(a,h)anthracene	0.10	13	2	0.58
Fluoranthene	0.69	13	2	2.28
Indeno(1,2,3-cd)pyrene	0.38	13	2	0.47

5. It should be noted that the PAH impact is within the vicinity of BH3 and the vertical extent of the impact is approximately 3.05 m bgs. Given the soil impact is localized and within shallow depth, the impacted soil can be excavated and disposed at a landfill during the construction phase.
6. The soil analytical results indicated that EC and SAR were detected at concentrations above the applicable MECP (2011) Table 3 Site Condition Standards in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional land use and coarse textured soils. However, under the newly amended O.Reg.153/04 (O.Reg.407/19) Section 49.1 (1), 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 3 SCS. As de-icing salts are used at the Site for vehicular and pedestrian safety, EC and SAR are not considered contaminants of concern.
7. A total of fifteen (15) soil samples were submitted from across the Site for pH analysis. It is acknowledged that one (1) soil sample had an elevated subsurface soil pH at BH2-SS6 from 3.81-4.42 m bgs. Three (3) additional soil samples were collected within 2 m radius of BH2 (BH2A-SS6, BH2B-SS6, and BH2C-SS6) at a sample depth of 3.81 m to 4.42 m bgs. The pH levels of all four (4) soil samples were averaged following the MECP's guidelines as specified in the "Environmentally Sensitive Areas: pH levels" technical update (MECP 2019). The average pH from the BH2, BH2A, BH2B, and BH2C soil samples is 10.97 which is within the MECP acceptable range for sub-surface soil of 5 to 11.
8. The groundwater analytical results indicated that all parameters were detected below the applicable MECP (2011) Table 3 Site Condition Standards.

7 Conclusions and Recommendations

As a result of this Phase Two Environmental Site Assessment, no significant environmental impairment with respect to soil or groundwater is expected. No further investigation is required. Upon completion of the minor and localized PAHs impacts in soil, an RSC can be filed with the MECP.

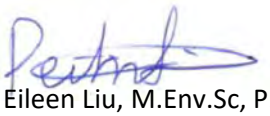
General Limitations

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.



Eileen Liu, M.Env.Sc, P.Geo
Project Manager



Darko Strajin, P.Eng.
Managing Partner

8 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 (2019) "Environmentally Sensitive Areas: pH". Retrieved from https://www.ontario.ca/page/environmentally-sensitive-areas-ph-levels. Updated June 3, 2019.
4. Toporama. Retrieved from http://www.atlas.gc.ca/toporama/en/index.html

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

1. Trow (2007) Phase II Environmental Site Assessment, 1062 Cooke Boulevard, Burlington, Ontario. Trow Associates Inc. January 11, 2007.
2. Pinchin (2018) Phase I Environmental Site Assessment, 1062 and 1074 Cooke Boulevard, Burlington, Ontario. Pinchin Ltd. June 14, 2018.
3. BIG (2021) Draft Phase One Environmental Site Assessment, 1062 and 1074 Cooke Boulevard, Burlington, Ontario. B.I.G. Consulting Inc. June 16, 2021.

Figures



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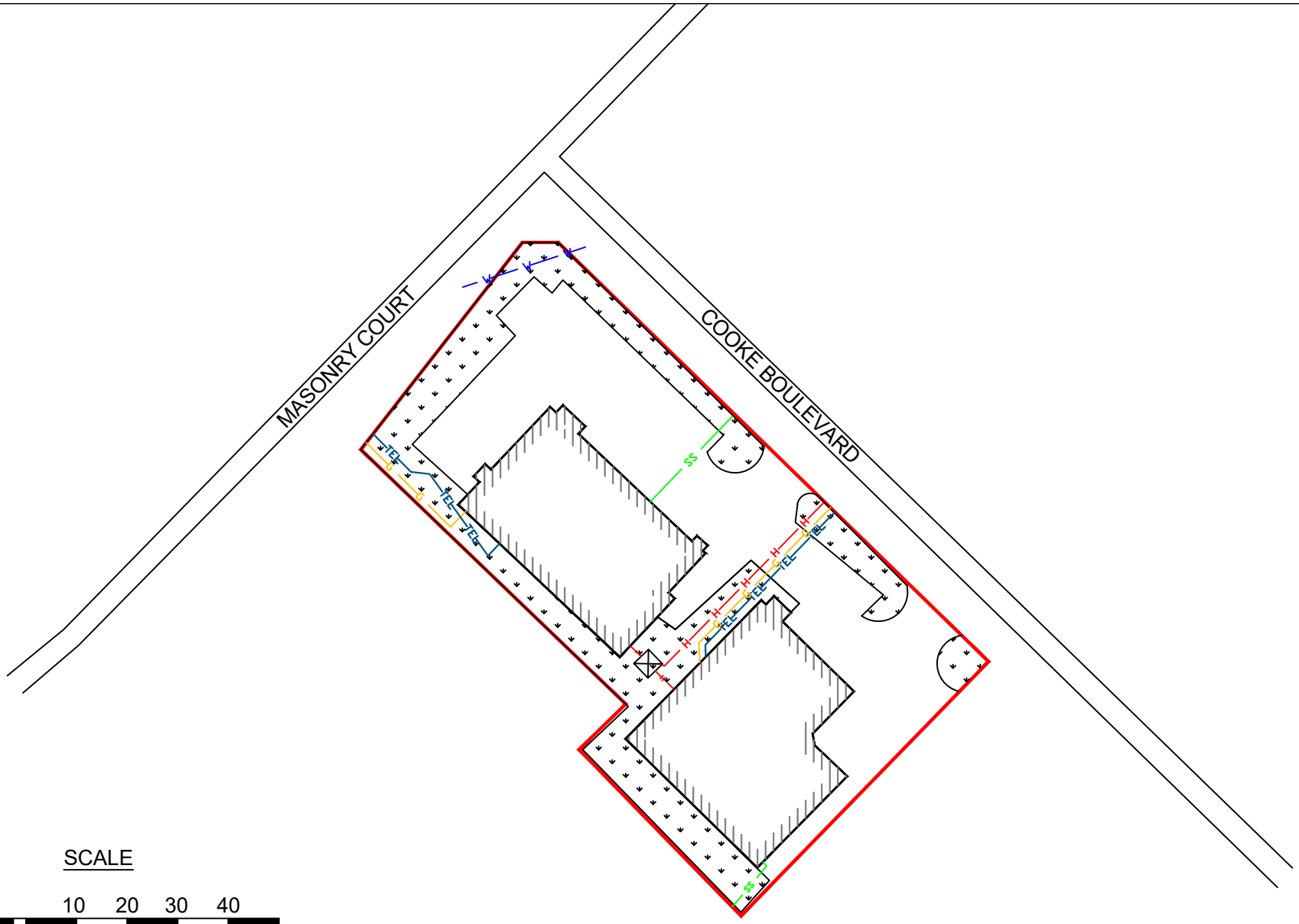
SITE BOUNDARY

IMAGERY OBTAINED FROM TOPORAMA, NATURAL RESOURCES CANADA,2017

TITLE AND LOCATION

SITE LOCATION PLAN
SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD,
BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	1



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LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- TRANSFORMER
- LANDSCAPED AREAS
- WATER
- SEWER
- GAS
- HYDRO
- TELECOMMUNICATIONS

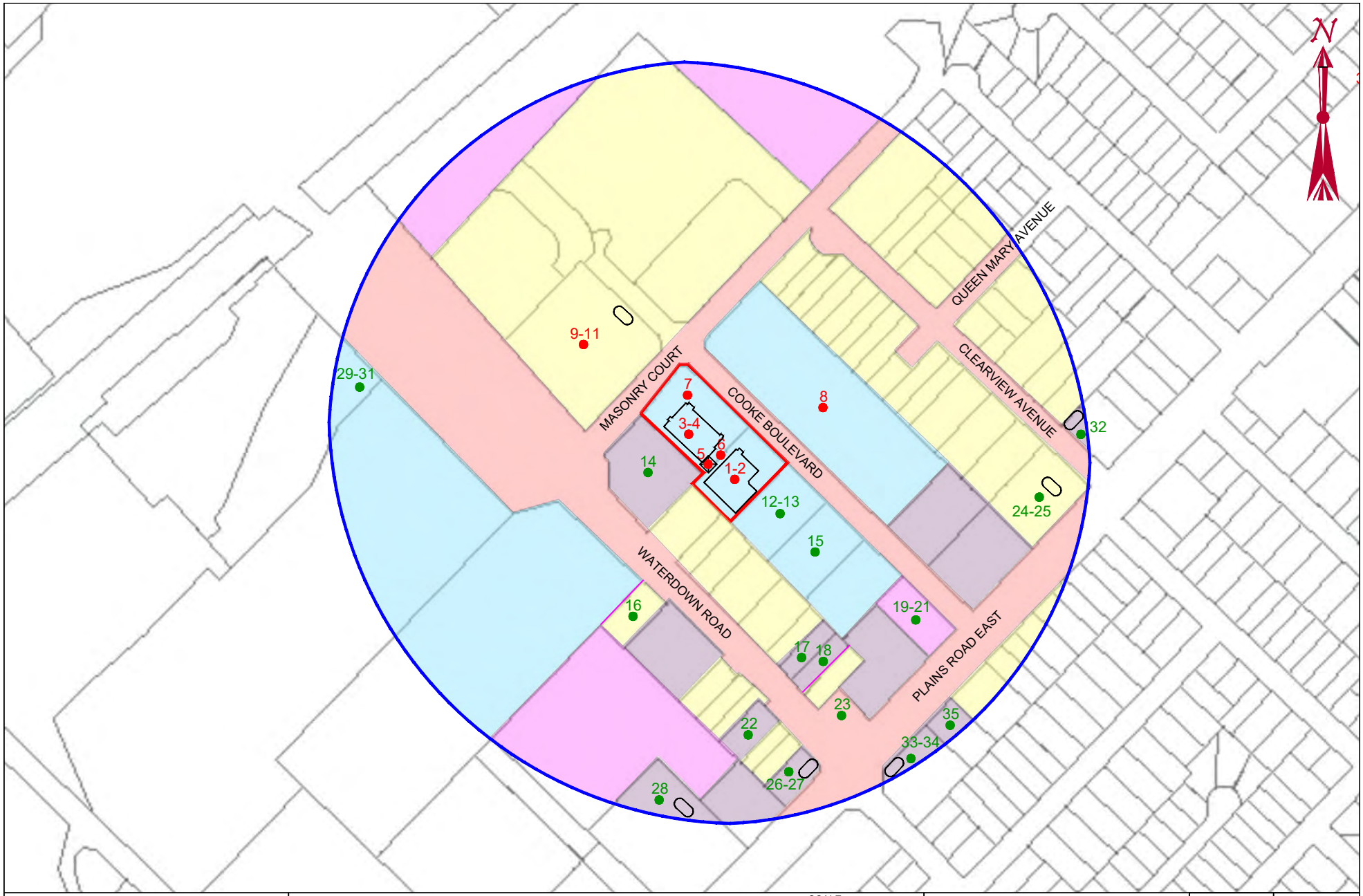
TITLE AND LOCATION

SITE LAYOUT AND UTILITIES PLAN

SUPPLEMENTAL PHASE TWO ESA

1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
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DATE	FIG NO.
JULY 2021	2



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LEGEND

- SITE BOUNDARY
- PHASE ONE STUDY AREA BOUNDARY
- RESIDENTIAL LAND USE
- COMMERCIAL LAND USE
- COMMUNITY LAND USE
- INDUSTRIAL LAND USE
- AGRICULTURAL OR OTHER LAND USE
- PCA BOUNDARY

SCALE

25m 0m 50m 100m

- TRANSFORMER
- FORMER UNDERGROUND STORAGE TANK (UST) LOCATION
- 1 PCA IDENTIFIER
- 1 PCA IDENTIFIER NOT CONTRIBUTING TO APEC

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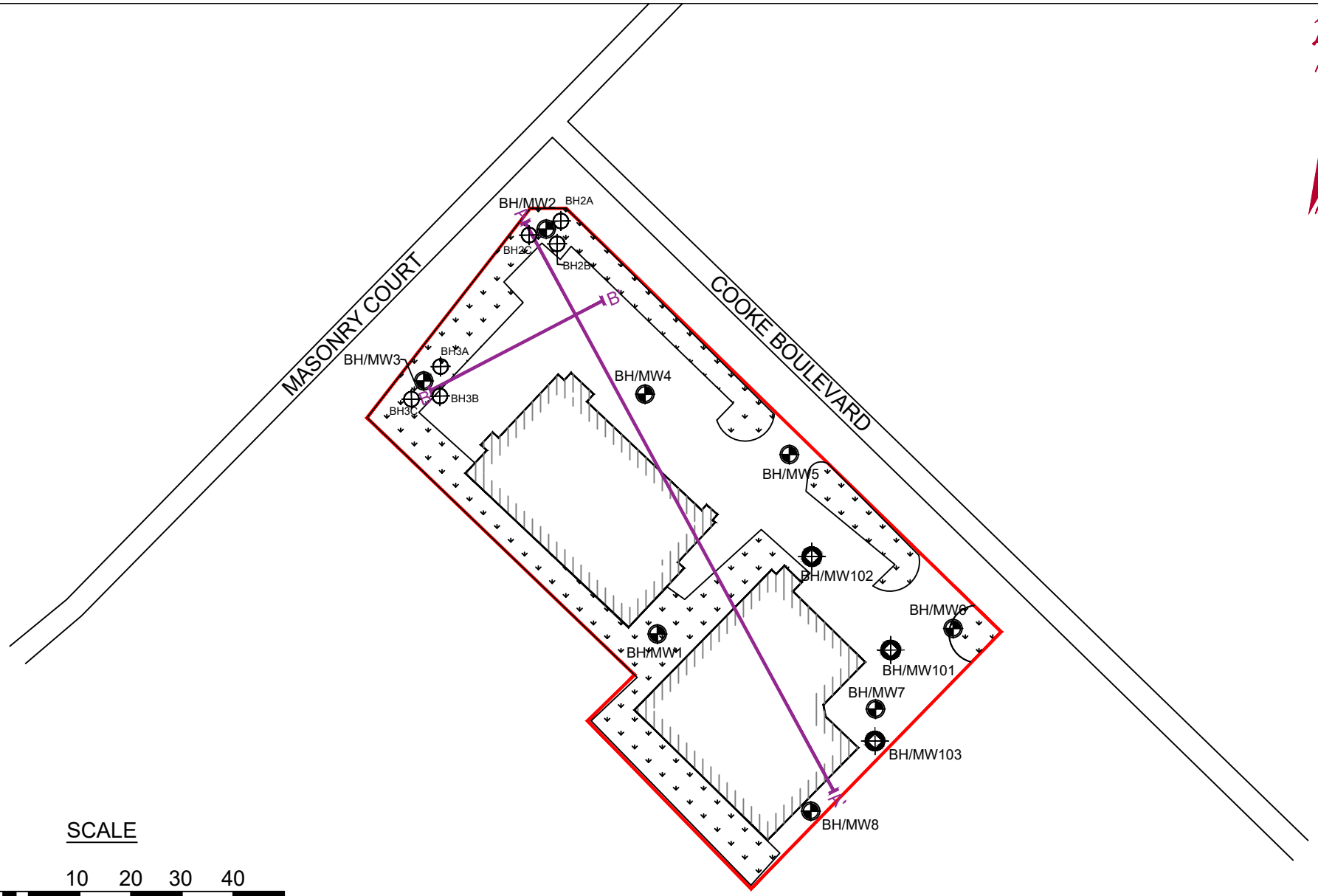
TITLE AND LOCATION

PHASE ONE STUDY AREA AND POTENTIALLY CONTAMINATING ACTIVITIES (PCAs)

SUPPLEMENTAL PHASE TWO ESA

1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	O.A.
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AS NOTED	S.L.
DATE	FIG NO.
JULY 2021	3



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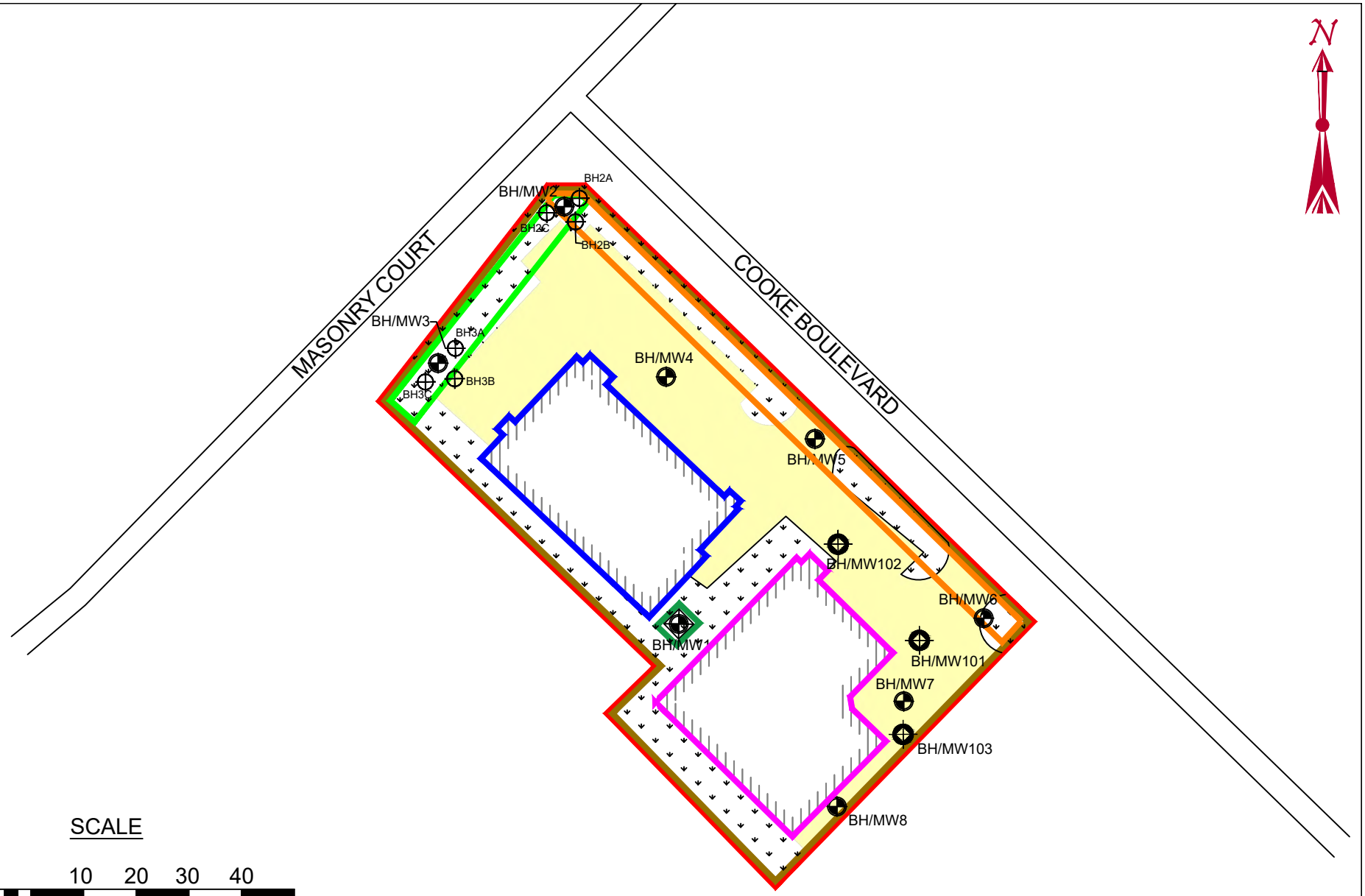
LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LANDSCAPED AREAS
- LOCATION OF BOREHOLE/MONITORING WELL (BIG, 2021)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL (TROW, 2007)
- A A' GEOLOGICAL CROSS SECTION

TITLE AND LOCATION

BOREHOLE/MONITORING WELL LOCATION PLAN
SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	4



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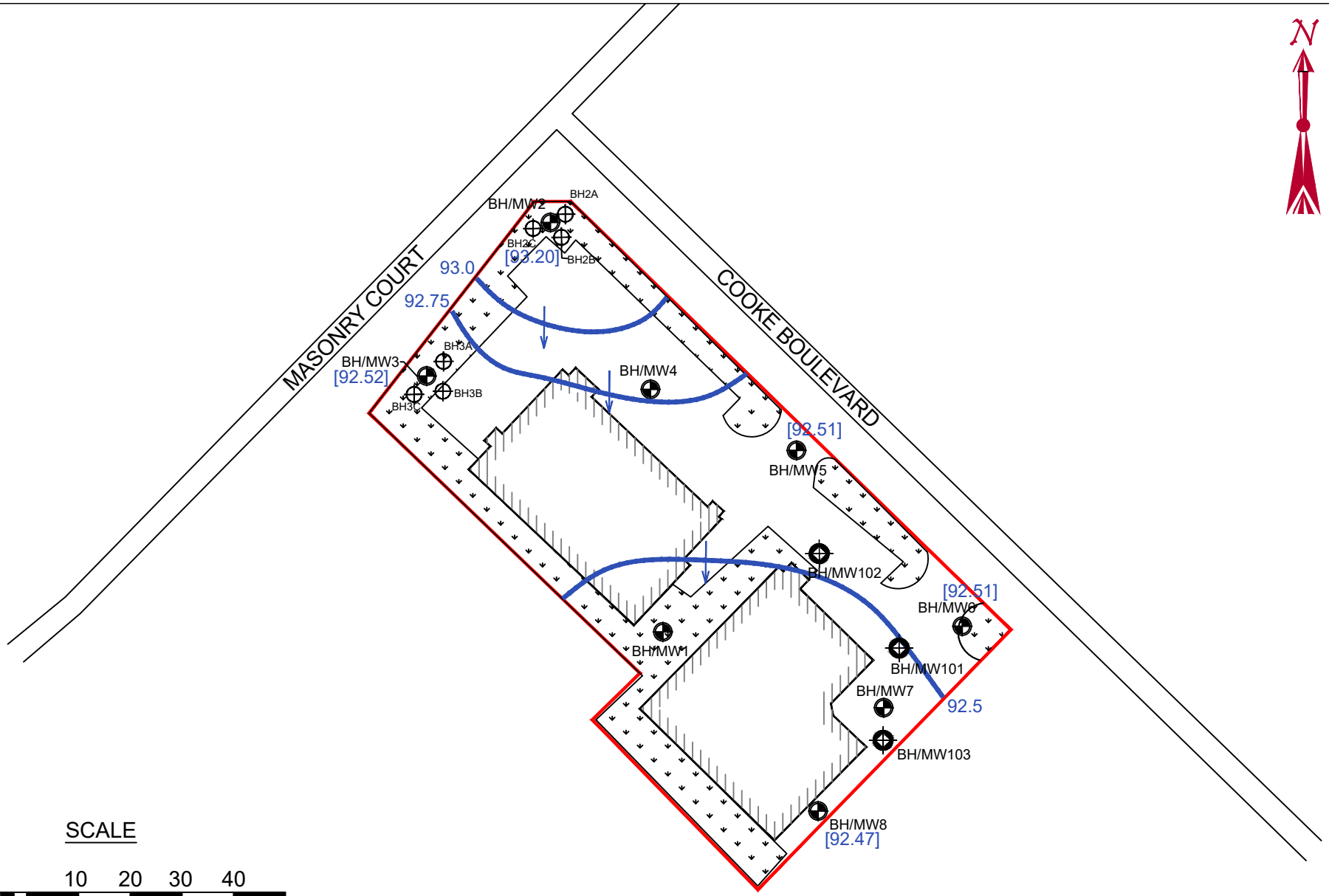
- SITE BOUNDARY
- BUILDING FOOTPRINT
- APECs 1-2
- APECs 3-4
- APEC 5
- APEC 6
- APEC 7
- APEC 8
- APECs 9-11
- TRANSFORMER
- LANDSCAPED AREAS
- LOCATION OF BOREHOLE/MONITORING WELL (BIG, 2021)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL (TROW, 2007)

TITLE AND LOCATION

BOREHOLE/MONITORING WELL LOCATION PLAN WITH AREAS OF POTENTIAL ENVIRONMENTAL CONCERNS (APECS)

SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD,
BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	5



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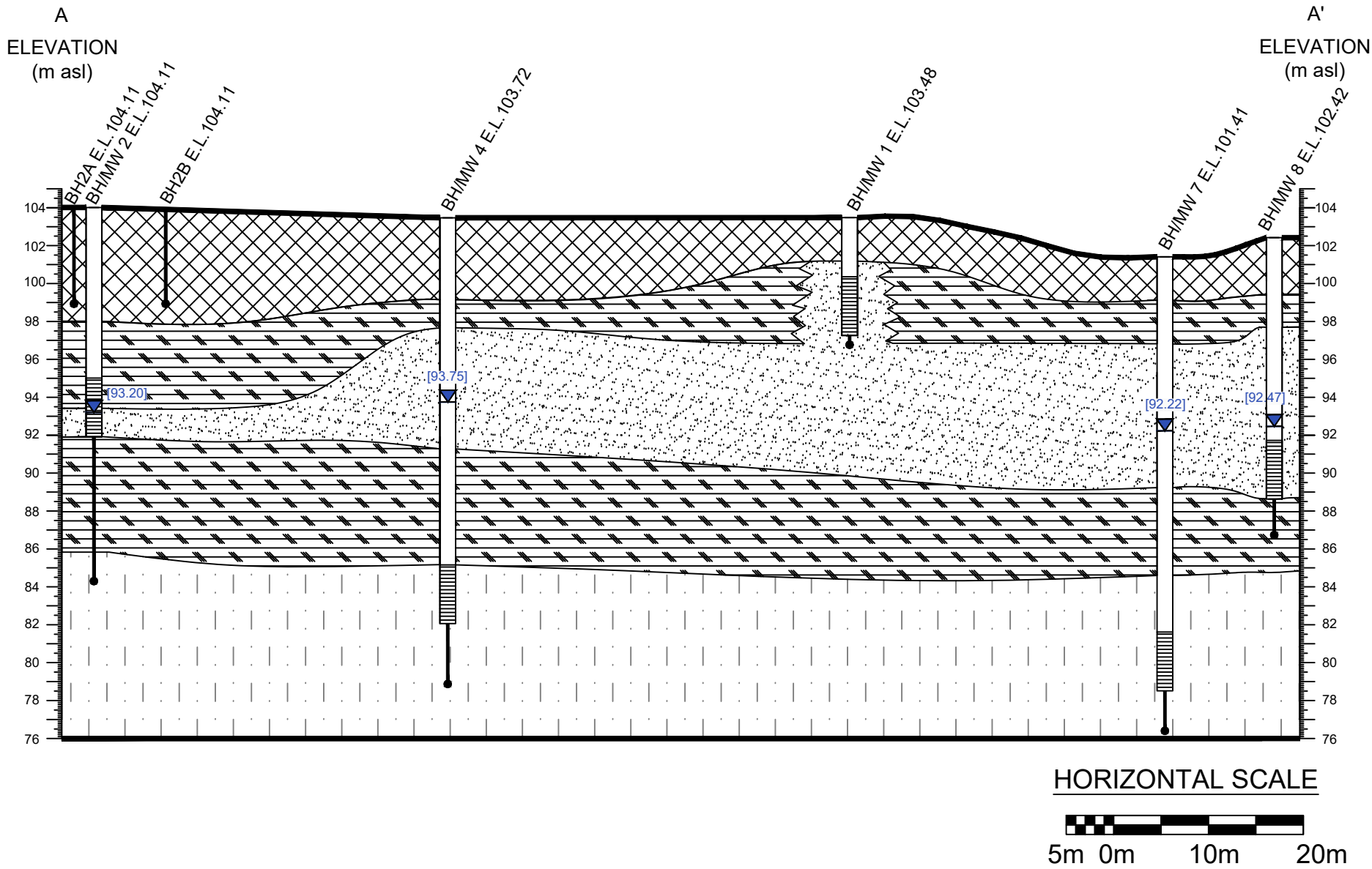
LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL (BIG, 2021)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL (TROW, 2007)
- LANDSCAPED AREAS
- GROUNDWATER CONTOUR
- INTERPRETED DIRECTION OF GROUNDWATER FLOW
- [XX.XX] WATERLEVEL MEASUREMENT (JUNE 10, 2021) (m asl)

TITLE AND LOCATION

GROUNDWATER CONTOUR PLAN
SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
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DATE	FIG NO.
JULY 2021	6



HORIZONTAL SCALE

5m 0m 10m 20m

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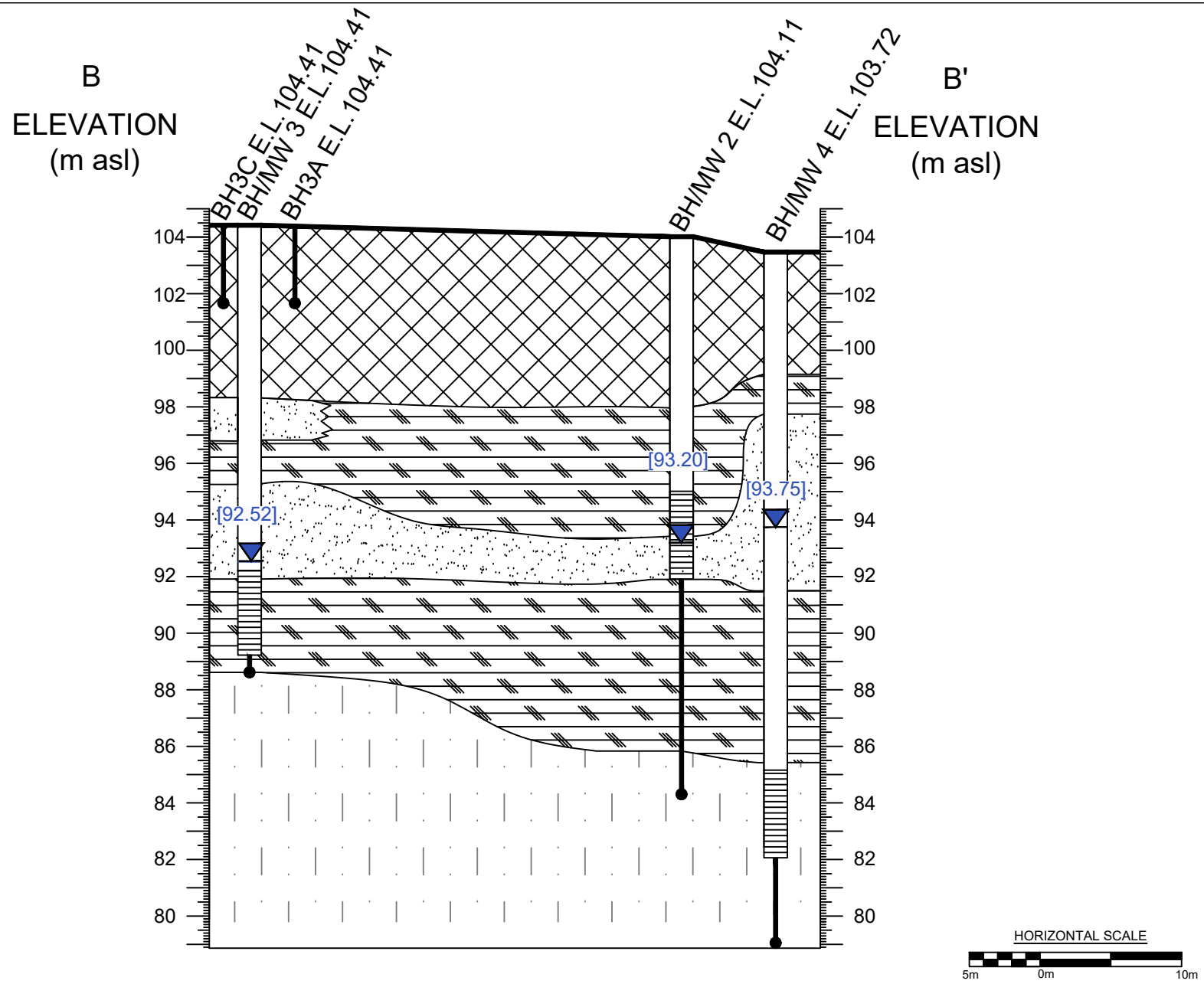
LEGEND

- ASPHALT / GRANULAR
- FILL
- CLAYEY SILT / SILTY CLAY TILL
- SAND / SILTY SAND TILL
- BEDROCK
- WATER LEVEL
- [xx.xx] WATER LEVEL MEASUREMENT (JUNE 10, 2021) (m asl)

TITLE AND LOCATION

GEOLOGICAL CROSS SECTION A-A'
SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	7



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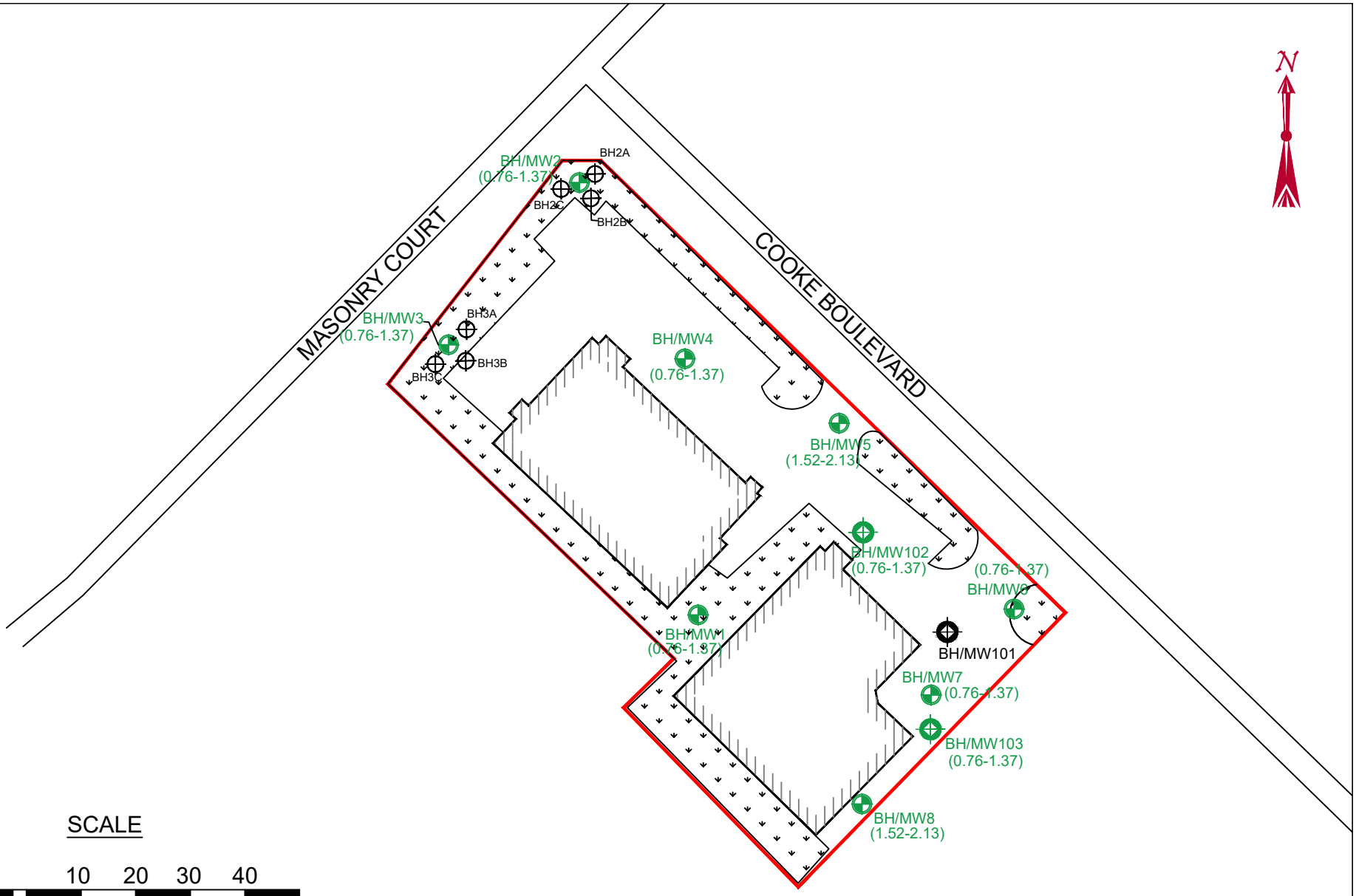
LEGEND

- ASPHALT / GRANULAR
- FILL
- CLAYEY SILT / SILTY CLAY TILL
- SAND / SILTY SAND TILL
- BEDROCK
- WATER LEVEL
- [xx.xx] WATER LEVEL MEASUREMENT (JUNE 10, 2021) (m asl)

TITLE AND LOCATION

GEOLOGICAL CROSS SECTION B-B'
SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
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SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	8



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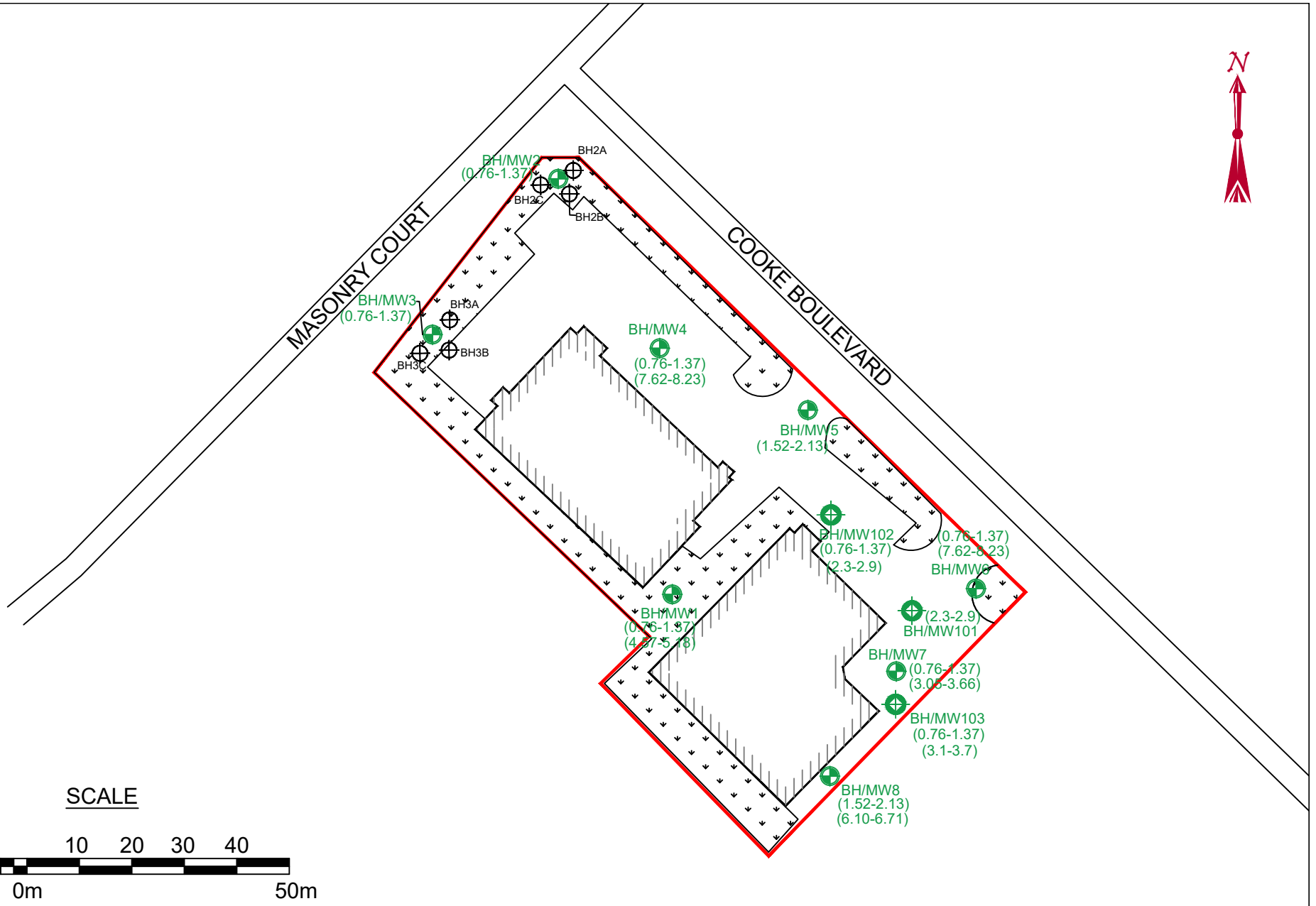
LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG, 2021)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- MEETS MECP TABLE 3 SCS
- EXCEEDS MECP TABLE 3 SCS
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

PHC CONCENTRATIONS IN SOIL
SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	9



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LEGEND

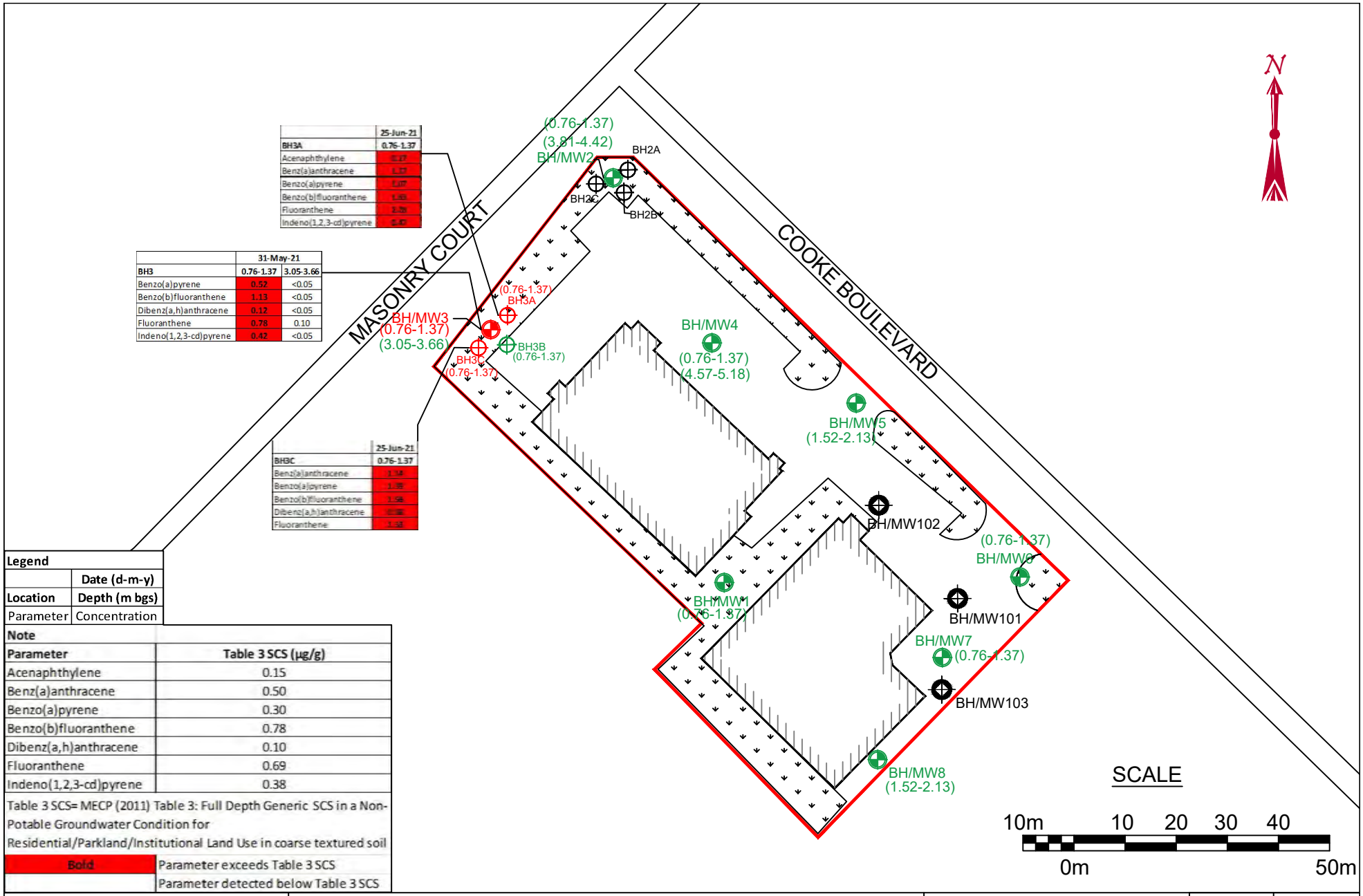
- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG, 2021)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- MEETS MECP TABLE 3 SCS
- EXCEEDS MECP TABLE 3 SCS
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

VOCs (INCLUDING BTEX) CONCENTRATIONS IN SOIL SUPPLEMENTAL PHASE TWO ESA

1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	10



	25-Jun-21
BH3A	0.76-1.37
Acenaphthylene	0.17
Benz(a)anthracene	1.37
Benzo(a)pyrene	1.07
Benzo(b)fluoranthene	1.93
Fluoranthene	2.78
Indeno(1,2,3-cd)pyrene	0.47

	31-May-21	
BH3	0.76-1.37	3.05-3.66
Benzo(a)pyrene	0.52	<0.05
Benzo(b)fluoranthene	1.13	<0.05
Dibenz(a,h)anthracene	0.12	<0.05
Fluoranthene	0.78	0.10
Indeno(1,2,3-cd)pyrene	0.42	<0.05

	25-Jun-21
BH3C	0.76-1.37
Benz(a)anthracene	1.14
Benzo(a)pyrene	1.35
Benzo(b)fluoranthene	1.58
Dibenz(a,h)anthracene	0.18
Fluoranthene	3.34

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

Note	
Parameter	Table 3 SCS (µg/g)
Acenaphthylene	0.15
Benz(a)anthracene	0.50
Benzo(a)pyrene	0.30
Benzo(b)fluoranthene	0.78
Dibenz(a,h)anthracene	0.10
Fluoranthene	0.69
Indeno(1,2,3-cd)pyrene	0.38
Table 3 SCS= MECP (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional Land Use in coarse textured soil	
Bold	Parameter exceeds Table 3 SCS
	Parameter detected below Table 3 SCS

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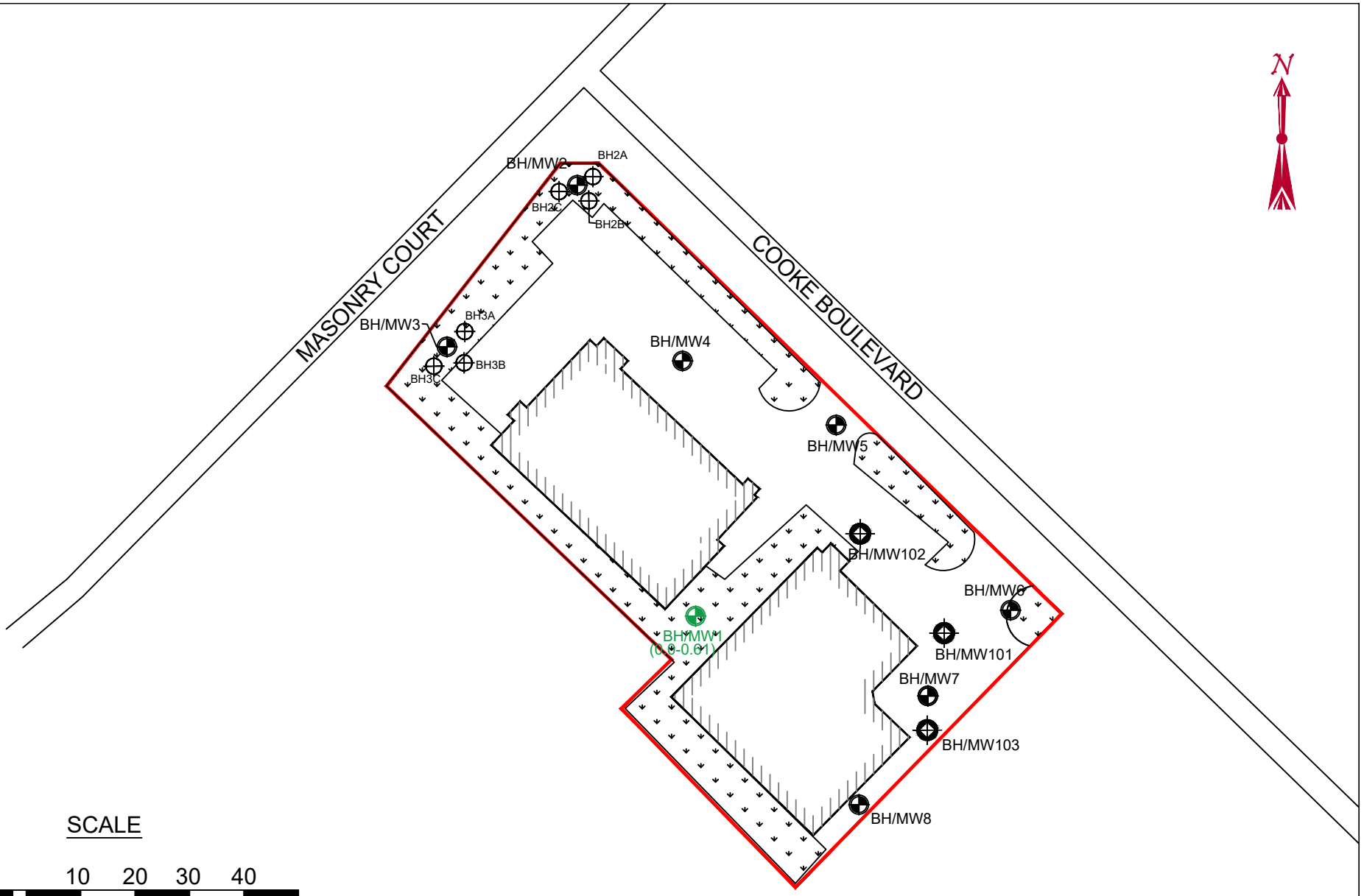
LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG, 2021)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- MEETS MECP TABLE 3 SCS
- EXCEEDS MECP TABLE 3 SCS
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

PAH IMPACTS IN SOIL
SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	11



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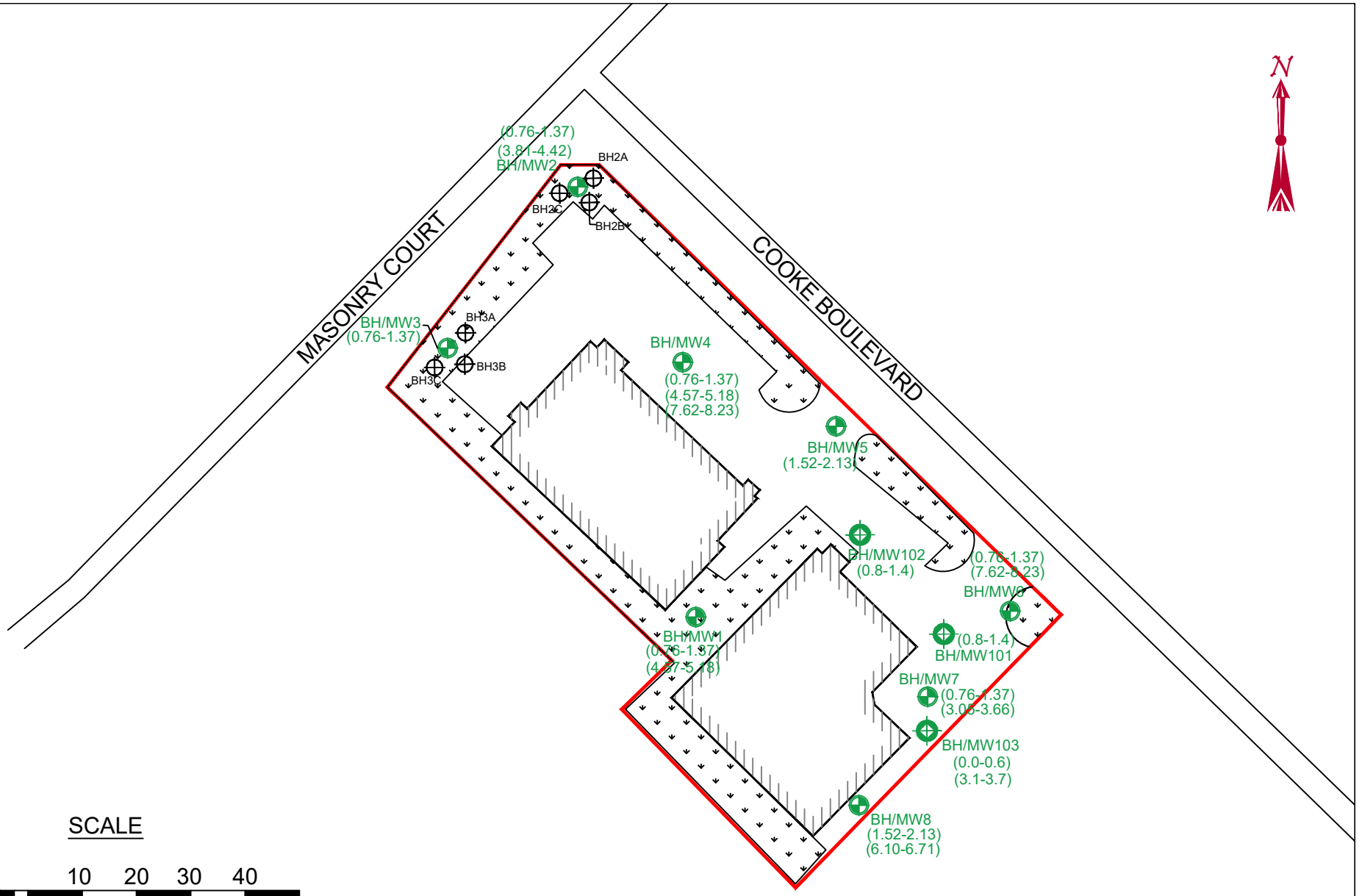
LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG, 2021)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- MEETS MECP TABLE 3 SCS
- EXCEEDS MECP TABLE 3 SCS
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

PCB CONCENTRATIONS IN SOIL
SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	12



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LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG, 2021)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- MEETS MECP TABLE 3 SCS
- EXCEEDS MECP TABLE 3 SCS
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

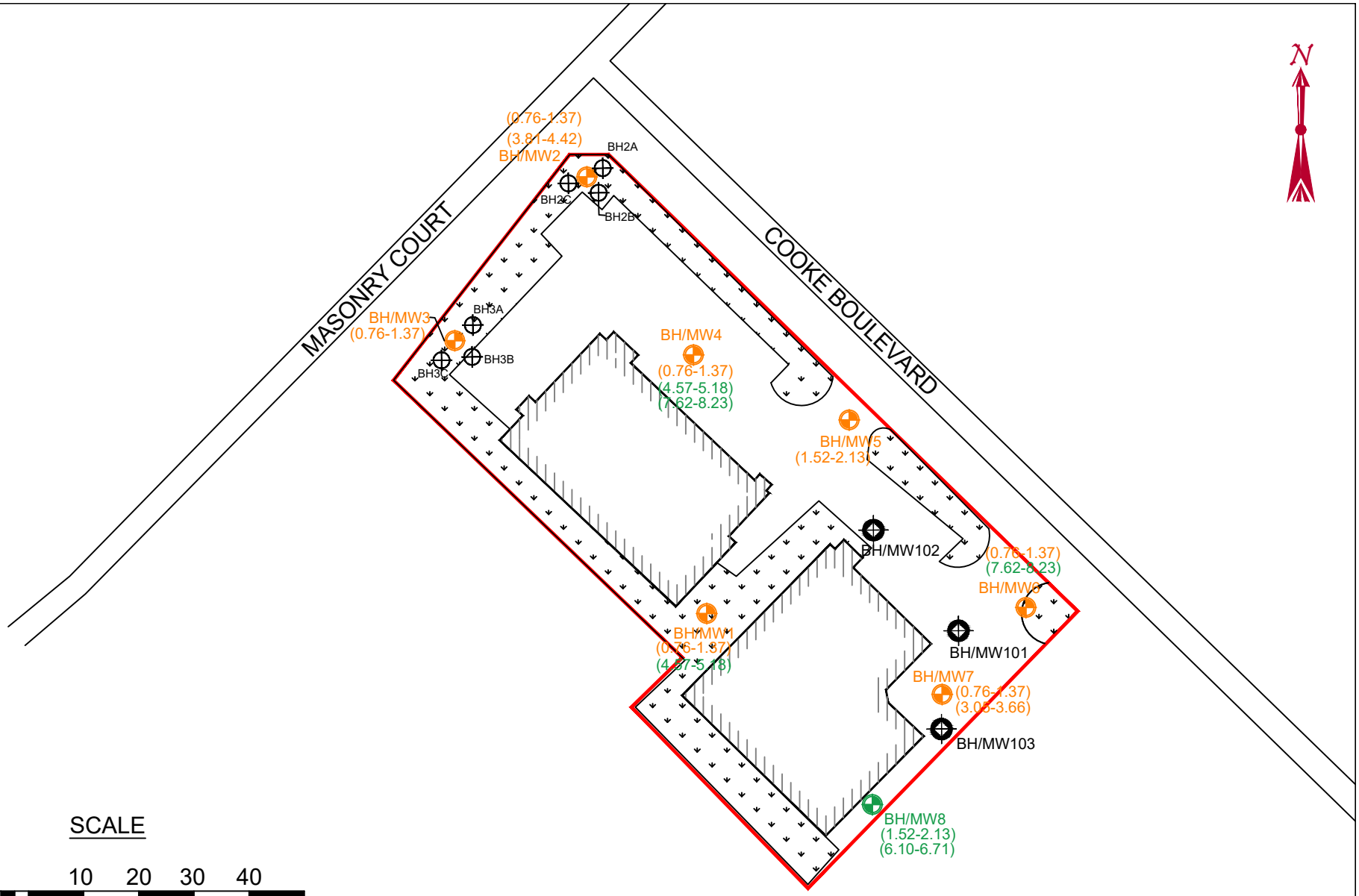
TITLE AND LOCATION

METALS (As, Sb, Se, B-HWS, Cr(VI), Hg, CN-) CONCENTRATIONS IN SOIL

SUPPLEMENTAL PHASE TWO ESA

1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	13



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LEGEND

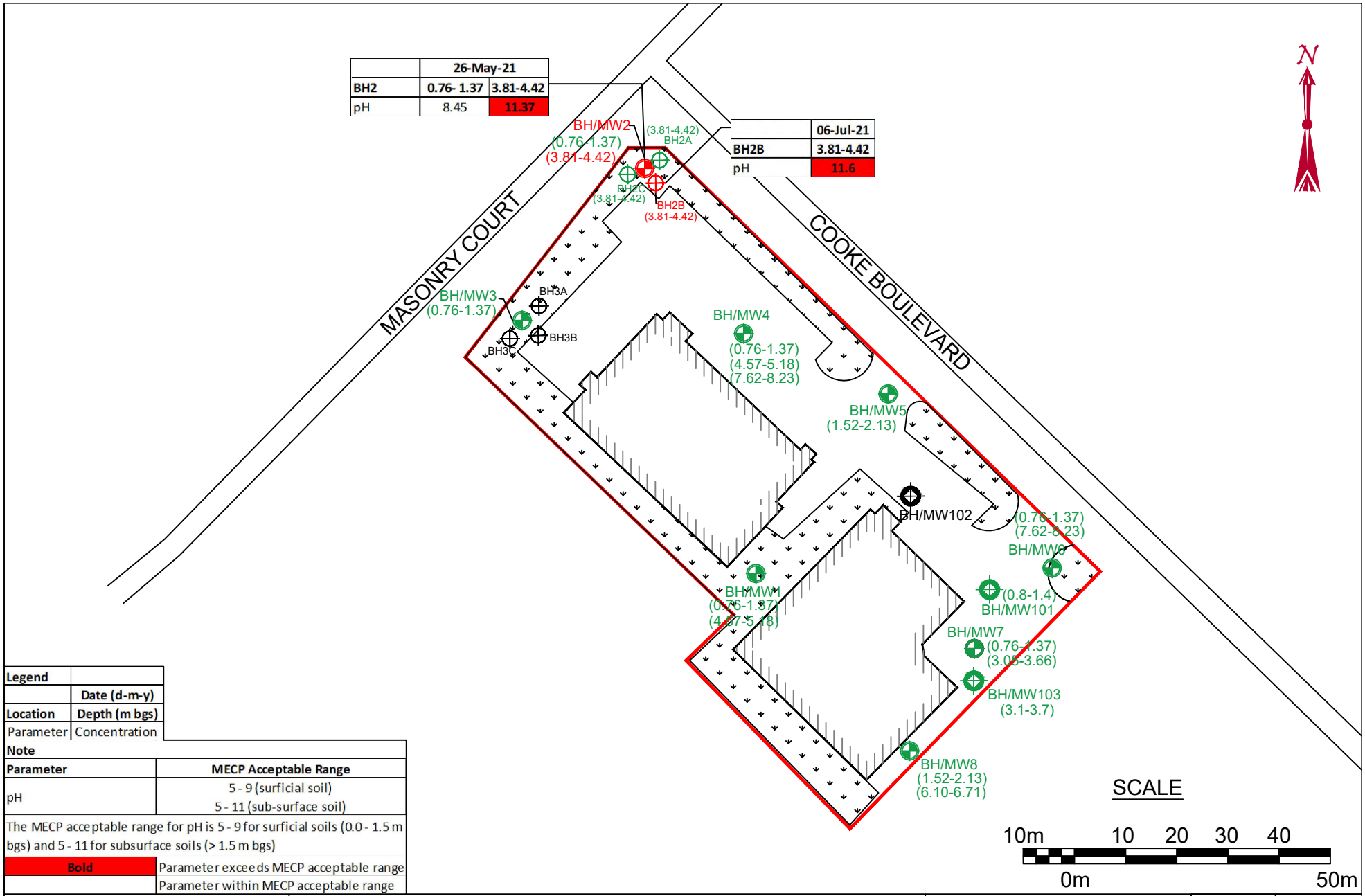
- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG 2020)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- MEETS MECP TABLE 3 SCS
- CONCENTRATION ABOVE TABLE 3 SCS, BUT NOT CONSIDERED A COC
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

EC AND SAR CONCENTRATIONS IN SOIL SUPPLEMENTAL PHASE TWO ESA

1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	14



	26-May-21	
BH2	0.76- 1.37	3.81-4.42
pH	8.45	11.37

	06-Jul-21
BH2B	3.81-4.42
pH	11.6

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

Note	
Parameter	**MECP Acceptable Range**
pH	5 - 9 (surficial soil) 5 - 11 (sub-surface soil)
The MECP acceptable range for pH is 5 - 9 for surficial soils (0.0 - 1.5 m bgs) and 5 - 11 for subsurface soils (> 1.5 m bgs)	
Bold	Parameter exceeds MECP acceptable range
	Parameter within MECP acceptable range

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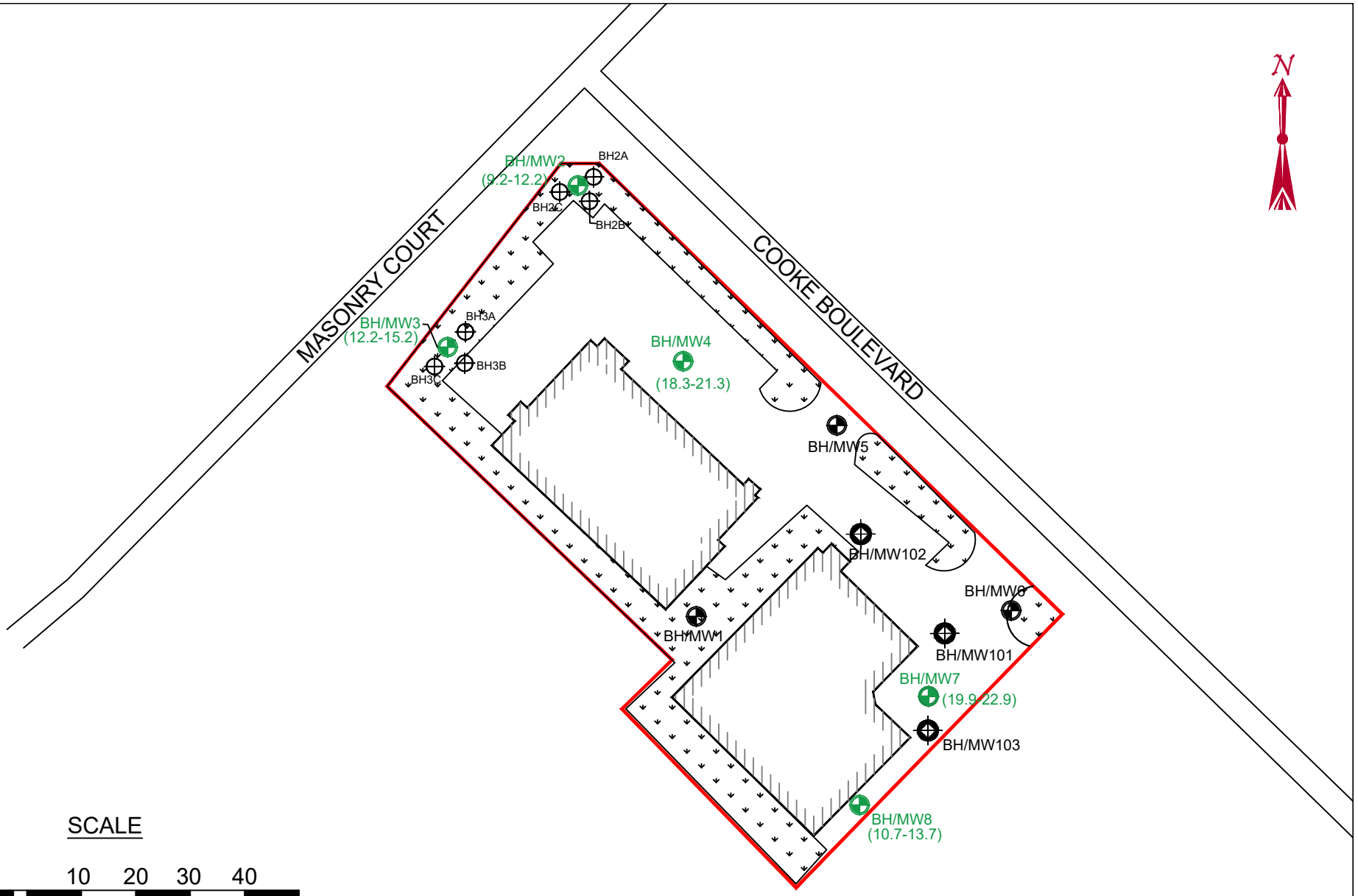
LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG, 2021)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- WITHIN ACCEPTABLE MECP pH RANGE FOR SURFICIAL AND SUBSURFACE SOIL
- OUTSIDE ACCEPTABLE MECP pH RANGE FOR SURFICIAL AND SUBSURFACE SOIL
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

pH IN SOIL
SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
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SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	15



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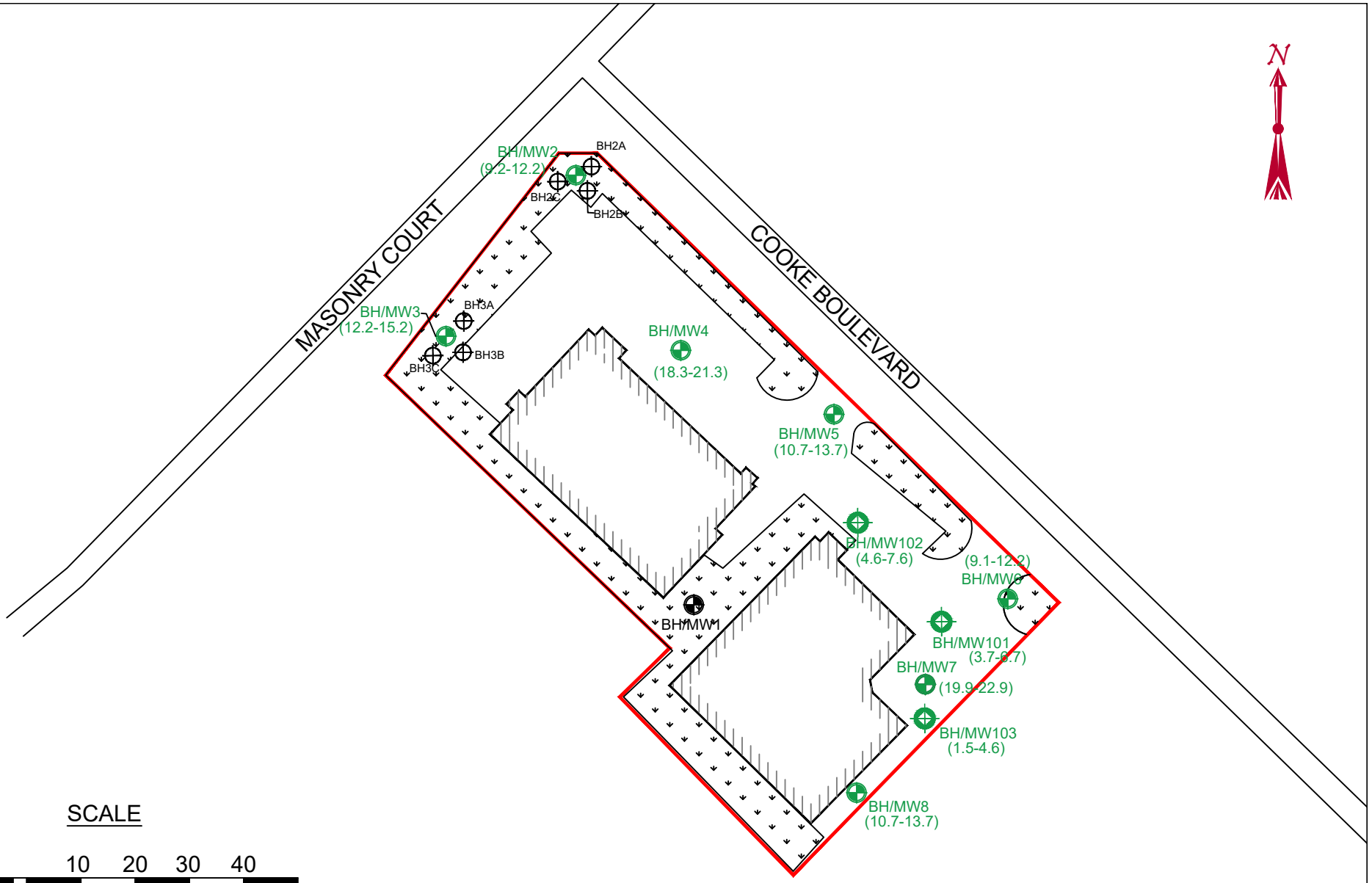
LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG 2020)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- MEETS MECP TABLE 3 SCS
- EXCEEDS MECP TABLE 3 SCS
- [xx.xx] WELL SCREEN DEPTH (m bgs)

TITLE AND LOCATION

PHC CONCENTRATIONS IN GROUNDWATER
SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	16



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LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG 2020)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- MEETS MECP TABLE 3 SCS
- EXCEEDS MECP TABLE 3 SCS
- [xx.xx] WELL SCREEN DEPTH (m bgs)

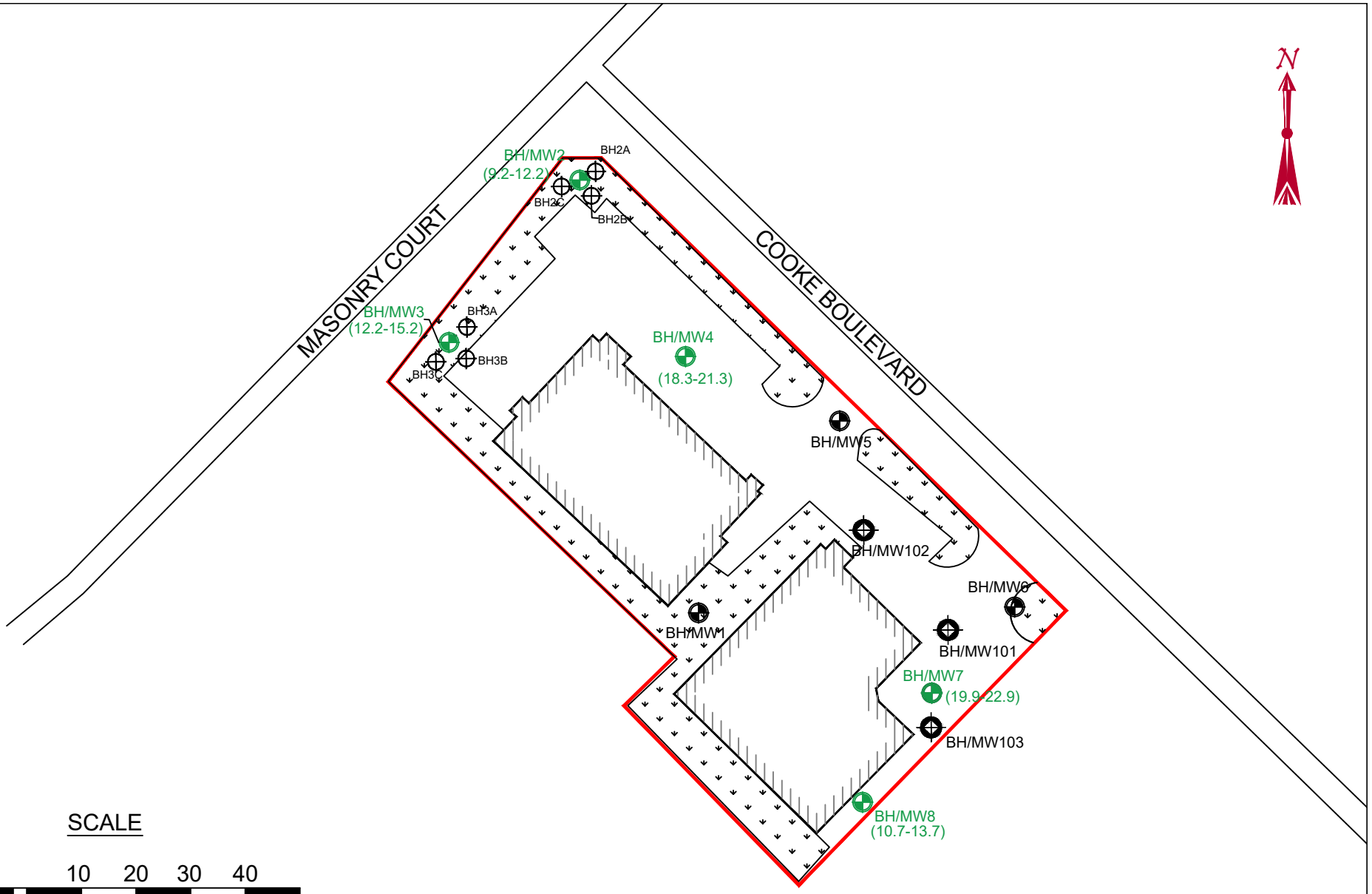
TITLE AND LOCATION

VOCs (INCLUDING BTEX) CONCENTRATIONS IN GROUNDWATER

SUPPLEMENTAL PHASE TWO ESA

1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
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SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	17



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LEGEND

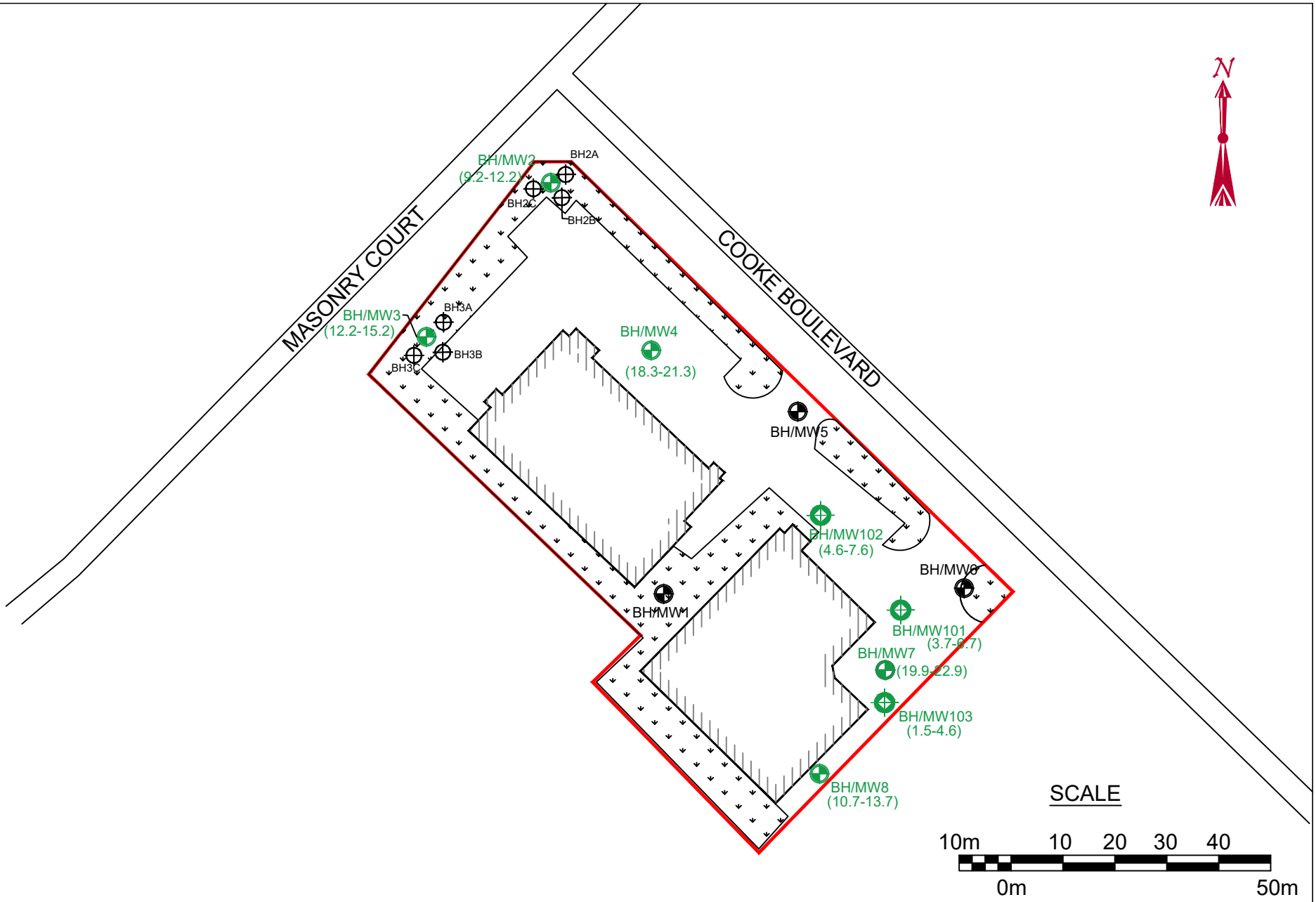
- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG 2020)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- MEETS MECP TABLE 3 SCS
- EXCEEDS MECP TABLE 3 SCS
- [xx.xx] WELL SCREEN DEPTH (m bgs)

TITLE AND LOCATION

PAH CONCENTRATIONS IN GROUNDWATER SUPPLEMENTAL PHASE TWO ESA

1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	18



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LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG 2020)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- MEETS MECP TABLE 3 SCS
- EXCEEDS MECP TABLE 3 SCS
- [xx.xx] WELL SCREEN DEPTH (m bgs)

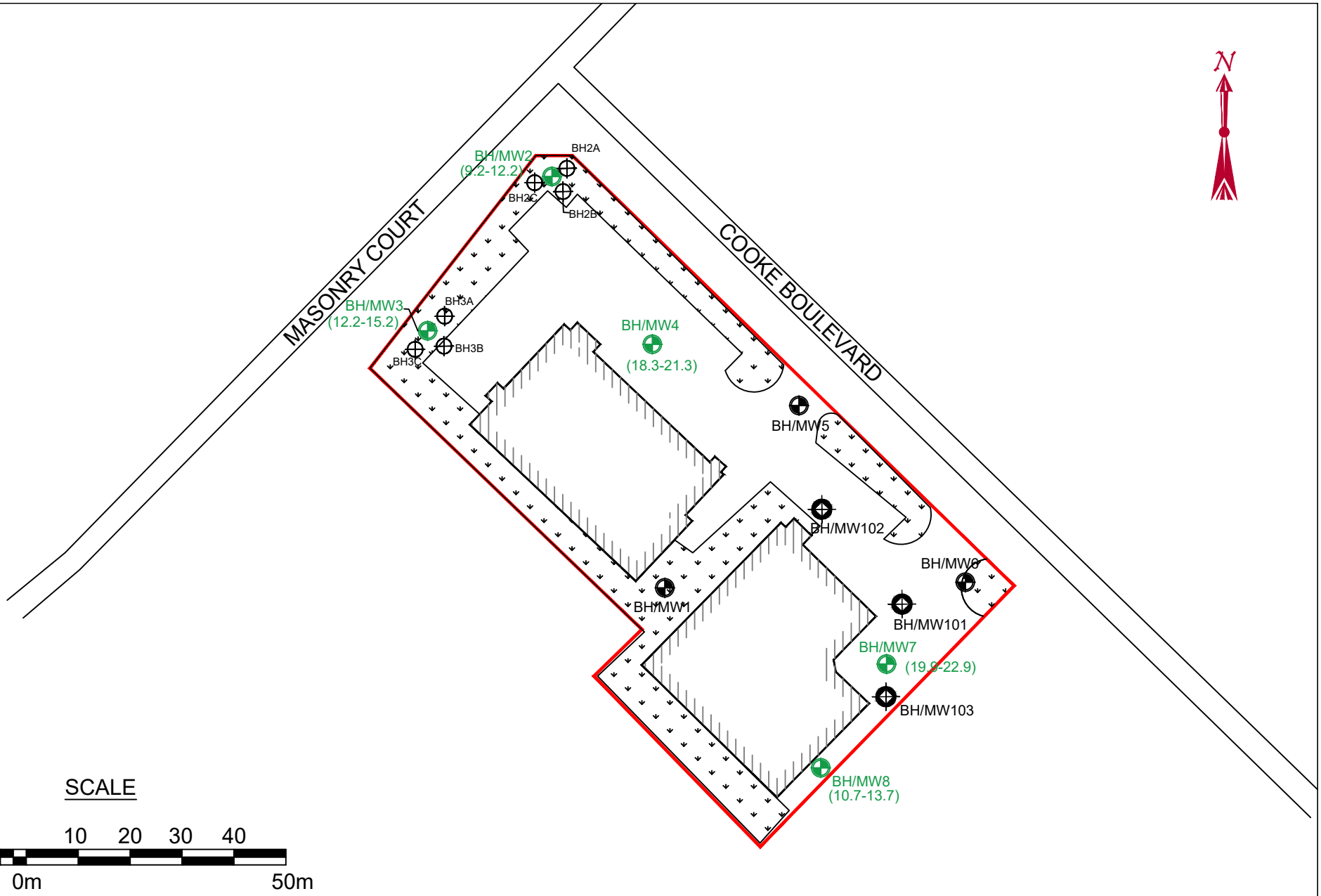
TITLE AND LOCATION

METALS (As, Sb, Se, Cr(VI), Hg, CN-) CONCENTRATIONS IN GROUNDWATER

SUPPLEMENTAL PHASE TWO ESA

1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	19



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LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF BOREHOLE/MONITORING WELL, (BIG 2020)
- LOCATION OF BOREHOLE (BIG, 2021)
- LOCATION OF BOREHOLE/MONITORING WELL, (TROW, 2007)
- LANDSCAPED AREAS
- MEETS MECP TABLE 3 SCS
- EXCEEDS MECP TABLE 3 SCS
- [xx.xx] WELL SCREEN DEPTH (m bgs)

TITLE AND LOCATION

SODIUM AND CHLORIDE CONCENTRATIONS IN GROUNDWATER

SUPPLEMENTAL PHASE TWO ESA
1062 AND 1074 COOKE BOULEVARD, BURLINGTON, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-462B	L.C.K.
SCALE	CK.
AS NOTED	T.D.
DATE	FIG NO.
JULY 2021	20

Tables

TABLE 1 – Areas of Potential Environmental Concern (APECs)
BIGC-ENV-462B – Supplemental Phase Two Environmental Site Assessment
1062 and 1074 Cooke Boulevard, Burlington, Ontario

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	PCA Details	Location of PCA (On-Site or Off-Site)	Contaminants of Concern	Media Potentially Impacted (Groundwater, soil and/or Sediment)
APEC 1: Former electronic parts manufacturer	Southern portion	#19 – Electronic and Computer Equipment Manufacturing	COCs used during the manufacturing process could have leaked to the ground surface	On-Site	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil and Groundwater
APEC 2: Print shop	Southern portion	#31 – Ink, Manufacturing, Processing and Bulk Storage	COCs used during the operation of the print shop could have leaked to the ground surface.	On-Site	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil and Groundwater
APEC 3: Former semiconductor, electronic coils, inductors, electronic components manufacturer	Northern portion	#19 – Electronic and Computer Equipment Manufacturing	COCs used during the manufacturing process could have leaked to the ground surface	On-Site	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil and Groundwater
APEC 4: Former print shop	Northern portion	#31 – Ink Manufacturing, Processing and Bulk Storage	COCs used during the operation of the former print shop could have leaked to the ground surface	On-Site	VOCs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil and Groundwater
APEC 5: Transformer	West-central portion	#55 – Transformer Manufacturing, Processing and Use	The transformer located on-Site could have leaked	On-Site	PCBs	Soil
APEC 6: De-icing salt usage	Exterior of Site buildings	"Other" – Usage of de-icing salt	De-icing salts are used on the exterior portions of the Site for	On-Site	Electrical Conductivity, SAR, Na, Cl-	Soil and Groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	PCA Details	Location of PCA (On-Site or Off-Site)	Contaminants of Concern	Media Potentially Impacted (Groundwater, soil and/or Sediment)
			vehicular and pedestrian safety			
APEC 7: Importation of fill material	Entire Site	#30 – Importation of Fill Material of Unknown Quality	Fill material is related to re-grading that occurred at the Site	On-Site	PAHs, metals, As, Sb, Se, B-HWS, Cr (VI), Hg, CN-	Soil and Groundwater
APEC 8: Semiconductor and other electronic component manufacturer	Eastern portion	#19 – Electronic and Computer Equipment Manufacturing	COCs used during the manufacturing process could have leaked to the ground surface	Off-Site (20 m east)	VOCs, metals, As, Sb, Se, Cr (VI), Hg, CN-	Groundwater
APEC 9: Former concrete manufacturer	Northern portion	#12 – Concrete, Cement and Lime Manufacturing	COCs used during the manufacturing process could have leaked to the ground surface	Off-Site (25 m north)	VOCs, metals, As, Sb, Se, Cr (VI), Hg, CN-	Groundwater
APEC 10: Former electronics manufacturer	Northern portion	#19 – Electronic and Computer Equipment Manufacturing	COCs used during the manufacturing process could have leaked to the ground surface	Off-Site (25 m norther	VOCs, metals, As, Sb, Se, Cr (VI), Hg, CN-	Groundwater
APEC 11: Former fuel storage tank	Northern portion	#28 – Gasoline and Associated Products Storage in Fixed Tanks	The former off-Site fuel storage tank could have leaked	Off-Site	PHCs and BTEX	Groundwater

(1) Areas of potential environmental concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment, including through,
   a. Identification of past or present uses in, on or under the phase one property, and
   b. Identification of potentially contaminating activity.

(2) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area.

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

TABLE 2 – Summary of Soil Samples Submitted for Chemical Analysis
BIGC-ENV-462B – Supplemental Phase Two Environmental Site Assessment
1062 and 1074 Cooke Boulevard, Burlington, Ontario

Soil Sample ID	Rationale	Requested Analyses	Consultant
BH1-SS1	APEC 5 characterization	PCBs	BIG
BH1-SS2	APEC 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH1-SS6	APEC 7 and Site characterization	BTEX, VOCs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH2-SS2	APEC 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH2-SS6	APEC 7 characterization	PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH2A-SS6	Site characterization	pH	BIG
BH2B-SS6	Site characterization	pH	BIG
BH2C-SS6	Site characterization	pH	BIG
BH3-SS2	APEC 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH3-SS5	Vertical delineation	PAHs	BIG
BH3A-SS2	APEC 7 characterization	PAHs	BIG
BH3B-SS2	APEC 7 characterization	PAHs	BIG
BH3C-SS2	APEC 7 characterization	PAHs	BIG
BH4-SS2	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH4-SS6	APECs 6 and 7 characterization	PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH4-SS8	APECs 6, 7 and Site characterization	BTEX, VOCs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH5-SS3	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH6-SS2	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH6-SS8	APECs 6, 7 and Site characterization	BTEX, VOCs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH7-SS2	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH7-SS5	APECs 6, 7 and Site characterization	BTEX, VOCs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH8-SS3	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG
BH8-SS7	APECs 6, 7 and Site characterization	BTEX, VOCs, Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC, SAR, pH	BIG

TABLE 3 – Monitoring Well Installation Details
BIGC-ENV-462B – Supplemental Phase Two Environmental Site Assessment
1062 and 1074 Cooke Boulevard, Burlington, Ontario

Well ID	Consultant	Ground Elevation (m asl)	Stick up (m)	Top of screen (m bgs)	Bottom of screen (m bgs)	Screen length (m)	Top of screen (m asl)	Bottom of screen (m asl)	Geologic Units Intercepted by Well Screen	Well Condition
BH/MW1	BIG (2021)	103.48	0.12	3.1	6.1	3.0	100.43	97.38	Silty sand till	Intact
BH/MW2	BIG (2021)	104.11	0.13	9.2	12.2	3.1	94.91	91.91	Silty clay/Clayey silt till; sand	Intact
BH/MW3	BIG (2021)	104.41	0.12	12.2	15.2	3.0	92.21	89.21	Sand; Silty clay/Clayey silt till	Intact
BH/MW4	BIG (2021)	103.72	0.13	18.3	21.3	3.0	85.42	82.42	Weathered shale	Intact
BH/MW5	BIG (2021)	102.64	0.10	10.7	13.7	3.0	91.94	88.94	Sand; Silty clay/Clayey silt till	Intact
BH/MW6	BIG (2021)	101.22	0.09	9.2	12.2	3.1	92.02	89.02	Sand; Silty clay/Clayey silt till	Intact
BH/MW7	BIG (2021)	101.41	0.11	19.8	22.9	3.1	81.61	78.51	Weathered shale	Intact
BH/MW8	BIG (2021)	102.42	0.13	10.7	13.7	3.0	91.72	88.72	Sand	Intact

TABLE 4 – Water Level Depths and Elevations
BIGC-ENV-462B – Supplemental Phase Two Environmental Site Assessment
1062 and 1074 Cooke Boulevard, Burlington, Ontario

Monitoring Well ID	Ground Surface Elevation	Groundwater Level (m bgs)	Groundwater Elevation (m asl)	Groundwater Monitoring Date
BH/MW1	103.48	DRY	DRY	June 10, 2021
BH/MW2	104.11	10.91	93.20	June 10, 2021
BH/MW3	104.41	11.89	92.52	June 10, 2021
BH3A	104.41	-	-	-
BH3B	104.41	-	-	-
BH3C	104.41	-	-	-
BH/MW4	103.72	9.97	93.75	June 10, 2021
BH/MW5	102.64	10.13	95.51	June 10, 2021
BH/MW6	101.22	8.71	92.51	June 10, 2021
BH/MW7	101.41	9.19	92.22	June 10, 2021
		9.14	92.27	June 29, 2021
BH/MW8	102.42	9.95	92.47	June 10, 2021

TABLE 5 – Summary of Groundwater Samples Submitted for Chemical Analysis
BIGC-ENV-462B – Supplemental Phase Two Environmental Site Assessment
1062 and 1074 Cooke Boulevard, Burlington, Ontario

Monitoring Well ID	Rationale	Requested Analyses	Consultant
MW2	APECs 7-11 characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride	BIG
MW3	APECs 7 and 9-11 characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride	BIG
MW4	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride	BIG
MW5	APEC 8 characterization	VOCs	BIG
MW6	APEC 8 characterization	VOCs	BIG
MW7	APECs 6, 7 and Site characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride	BIG
MW8	APECs 6, 7 and characterization	PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, Cr(VI), Hg, CN-, sodium, chloride	BIG

Appendix A - Sampling and Analysis Plan

1. Introduction

This appendix presents the Site Sampling and Analysis Plan (SSAP) that was developed in support of the Supplemental Phase Two Environmental Site Assessment (ESA), which will be conducted to provide further characterization of the Site subsurface conditions. The SSAP 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 Supplemental Phase Two ESA.

The SSAP 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 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 m long screens extending to a maximum depth of approximately 22.9 metres 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 25.3 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 truck mounted drilling machine equipped with hollow 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, 60 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 Wattera® tubing and a monsoon pump. 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 headspace.

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 Supplemental 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-spoon 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

Sample ID	MOECC (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH102-S2	BH103-S2	BH104-S2 (Dup of BH103-S2)	BH1-SS2	BH2-SS2	BH3-SS2	BH4-SS2	BH5-SS3	BH6-SS2	DUP06020 (Dup of BH6-SS2)	BH7-SS2	BH8-SS3
Lab ID		Q36496	Q36499	Q36503	2562504	2562506	2562508	2562580	2585860	2562584	2570936	2585867	2570930
Sampling Date		2-Jan-07	2-Jan-07	2-Jan-07	26-May-21	26-May-21	31-May-21	31-May-21	02-Jun-21	2-Jun-21	2-Jun-21	2-Jun-21	2-Jun-21
Soil Sample Depth (m)		0.76-1.37	0.76-1.37	0.76-1.37	0.76-1.37	0.76-1.37	0.76-1.37	0.76-1.37	1.52-2.13	0.76-1.37	0.76-1.37	0.76-1.37	1.52-2.13
Consultant		Trow	Trow	Trow	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		Maxxam	Maxxam	Maxxam	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis		A700246	A700246	A700246	21T756718	21T756718	21T756718	21T756718	21T759349	21T756718	21T757586	21T759349	21T757586
PHC F1 (C6-C10)	55	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<5	<5
PHC F1 (C6-C10) - BTEX	55	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5
PHC F2 (C10-C16)	98	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
PHC F3 (C16-C34)	300	12	35	170	170	<50	57	<50	<50	<50	<50	<50	<50
PHC F4 (C34-C50)	2800	<10	<10	31	150	<50	<50	<50	<50	<50	<50	<50	<50
Reached baseline at C50?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PHC F4 (C34-C50)-gravimetric	2800	-	-	-	-	-	-	-	-	-	-	-	-

All soil concentrations reported in µg/g.
'<' = Parameter below detection limit, as indicated
'NV'= No value
Bold Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.

Sample ID	MOECC (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH101-S4	BH102-S2	BH102-S4	BH103-S2	BH104-S2 (Dup of BH103-S2)	BH103-S5	BH103-S10 (Dup of BH103-S5)	BH1-SS2	BH1-SS6	BH2-SS2	BH3-SS2	BH4-SS2	BH4-SS8	BH5-SS3	BH6-SS2	DUP06020 (Dup of BH6-SS2)
Lab ID		Q36495	Q36496	Q36497	Q36499	Q36503	Q36500	Q36502	2562504	2562505	2562506	2562508	2562580	2562582	2585860	2562584	2570936
Sampling Date		2-Jan-07	2-Jan-07	2-Jan-07	2-Jan-07	2-Jan-07	2-Jan-07	2-Jan-07	26-May-21	26-May-21	26-May-21	31-May-21	31-May-21	31-May-21	2-Jun-21	2-Jun-21	2-Jun-21
Soil Sample Depth (m)		2.3-2.9	0.76-1.37	2.3-2.9	0.76-1.37	0.76-1.37	3.1-3.7	3.1-3.7	0.76-1.37	4.57-5.19	0.76-1.37	0.76-1.37	0.76-1.37	7.62-8.23	1.52-2.13	0.76-1.37	0.76-1.37
Consultant		Trow	Trow	Trow	Trow	Trow	Trow	Trow	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis		A700246	A700246	A700246	A700246	A700246	A700246	A700246	21T756718	21T756718	21T756718	21T756718	21T756718	21T756718	21T759349	21T756718	21T757586
Acetone	16	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Benzene	0.21	0.008	<0.02	0.01	<0.02	<0.02	0.013	0.009	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	13	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Bromoform	0.27	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Bromomethane	0.05	<0.003	-	<0.003	-	-	<0.003	<0.003	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Carbon Tetrachloride	0.05	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Chlorobenzene	2.4	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Chloroform	0.05	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-
Dibromochloromethane	9.4	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
1,2-Dichlorobenzene	3.4	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
1,3-Dichlorobenzene	4.8	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
1,4-Dichlorobenzene	0.083	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Dichlorodifluoromethane	16	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
1,1-Dichloroethane	3.5	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-
1,2-Dichloroethane	0.05	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	-
1,1-Dichloroethylene	0.05	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
cis-1,2-Dichloroethylene	3.4	<0.002	-	0.003	-	-	<0.002	<0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-
trans-1,2-Dichloroethylene	0.084	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
1,2-Dichloropropane	0.05	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	-
cis-1,3-Dichloropropene	0.05	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-
trans-1,3-Dichloropropene	0.05	<0.002	-	<0.002	-	-	<0.002	<0.002									
Ethylbenzene	2	0.003	<0.02	0.003	<0.02	<0.02	0.004	0.003	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide (1,2-Dibromoetha	0.05	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-
Hexane (n)	2.8	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Methylene chloride (Dichloromethane	0.1	<0.003	-	<0.003	-	-	<0.003	<0.003	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Methyl ethyl ketone (2-Butanone)	16	<0.025	-	<0.025	-	-	<0.025	<0.025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Methyl Isobutyl Ketone	1.7	<0.025	-	<0.025	-	-	<0.025	<0.025	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-
Methyl t-butyl ether (MTBE)	0.75	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Styrene	0.7	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
1,1,1,2-Tetrachloroethane	0.058	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-
1,1,2,2-Tetrachloroethane	0.05	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Tetrachloroethylene	0.28	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Toluene	2.3	0.015	<0.02	0.015	<0.02	<0.02	0.023	0.012	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	0.38	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
1,1,2-Trichloroethane	0.05	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-
Trichloroethylene	0.061	<0.002	-	0.011	-	-	<0.002	<0.002	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	-
Trichlorofluoromethane	4	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Vinyl Chloride	0.02	<0.002	-	<0.002	-	-	<0.002	<0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-
m-Xylene + p-Xylene	NV	0.013	<0.04	0.011	<0.04	<0.04	0.024	0.012	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	NV	0.004	<0.02	0.004	<0.02	<0.02	0.006	0.003	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (total)	3.1	0.017	<0.04	0.015	<0.04	<0.04	0.03	0.016	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

All soil concentrations reported in µg/g.
'<' = Parameter below detection limit, as indicated
'NV'= No value
Bold Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.

Sample ID	MOECC (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH6-SS8	DUP06080 (Dup of BH6-SS8)	BH7-SS2	BH7-SS5	BH8-SS3	BH8-SS7
Lab ID		2562585	2570932	2582567	2585868	2570930	2570931
Sampling Date		2-Jun-21	2-Jun-21	2-Jun-21	2-Jun-21	2-Jun-21	2-Jun-21
Soil Sample Depth (m)		7.62-8.23	7.62-8.23	0.76-1.37	3.05-3.66	1.52-2.13	6.10-6.71
Consultant		BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis		21T756718	21T757586	21T759349	21T759349	21T756718	21T756718
Acetone	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	0.27	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	2.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Dibromochloromethane	9.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	3.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	4.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.083	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	3.5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloroethane	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1-Dichloroethylene	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	3.4	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
trans-1,2-Dichloroethylene	0.084	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
cis-1,3-Dichloropropene	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
trans-1,3-Dichloropropene	0.05						
Ethylbenzene	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide (1,2-Dibromoetha	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Hexane (n)	2.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene chloride (Dichloromethane	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl ethyl ketone (2-Butanone)	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl t-butyl ether (MTBE)	0.75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	0.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.058	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,1,2,2-Tetrachloroethane	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Trichloroethylene	0.061	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichlorofluoromethane	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
m-Xylene + p-Xylene	NV	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	NV	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (total)	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

All soil concentrations reported in µg/g.
'<' = Parameter below detection limit, as indicated
'NV'= No value
Bold Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.

Sample ID	MOECC (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH1-SS2	DUP01020 (Dup of BH1-SS2)	BH2-SS2	BH2-SS6	BH3-SS2	BH3-SS5	BH3A-SS2	BH3B-SS2	BH3C-SS2	BH4-SS2	BH4-SS6	BH5-SS3	BH6-SS2	BH7-SS2	BH8-SS3
Lab ID		2562504	2570935	2562506	2562507	2562508	2625552	2662078	2662080	2662083	2562580	2562581	2585860	2562584	2585867	2570930
Sampling Date		26-May-21	26-May-21	26-May-21	26-May-21	31-May-21	31-May-21	25-Jun-21	25-Jun-21	25-Jun-21	31-May-21	31-May-21	02-Jun-21	02-Jun-21	02-Jun-21	02-Jun-21
Soil Sample Depth (m)		0.76-1.37	0.76-1.37	0.76-1.37	3.81-4.42	0.76-1.37	3.05-3.66	0.76-1.37	0.76-1.37	0.76-1.37	0.76-1.37	4.57-5.18	1.52-2.13	0.76-1.37	0.76-1.37	1.52-2.13
Consultant		BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis		21T756718	21T757586	21T756718	21T756718	21T756718	21T763049	21T766741	21T766743	21T766744	21T756718	21T756718	21T759349	21T756718	21T759349	21T757586
Acenaphthene	7.9	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	0.14	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.15	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	**0.17**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.67	<0.05	<0.05	<0.05	<0.05	0.15	<0.05	0.45	0.06	0.27	<0.05	<0.05	<0.05	<0.05	0.08	0.08
Benzo(a)anthracene	0.5	<0.05	<0.05	<0.05	<0.05	0.33	0.06	**1.17**	0.20	**1.14**	0.07	<0.05	<0.05	0.07	0.11	<0.05
Benzo(a)pyrene	0.3	0.08	0.12	<0.05	<0.05	**0.52**	<0.05	**1.07**	0.19	**1.35**	0.20	<0.05	<0.05	0.10	<0.05	<0.05
Benzo(b)fluoranthene	0.78	0.17	0.20	<0.05	<0.05	**1.13**	<0.05	**1.63**	0.25	**1.56**	0.26	<0.05	0.09	0.30	0.70	0.11
Benzo(ghi)perylene	6.6	0.06	0.06	<0.05	<0.05	0.46	<0.05	0.49	0.12	0.54	0.07	<0.05	<0.05	0.07	<0.05	<0.05
Benzo(k)fluoranthene	0.78	0.05	<0.05	<0.05	<0.05	0.41	<0.05	0.45	0.09	0.64	0.06	<0.05	<0.05	0.06	0.09	0.08
Chrysene	7	<0.05	0.06	<0.05	<0.05	0.29	<0.05	1.18	0.18	1.04	0.05	<0.05	<0.05	0.07	0.13	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	**0.12**	<0.05	0.09	<0.05	**0.58**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.14	0.20	<0.05	<0.05	**0.78**	0.10	**2.28**	0.33	**1.33**	0.20	<0.05	0.06	0.24	0.37	0.12
Fluorene	62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.18	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.38	0.07	0.07	<0.05	<0.05	**0.42**	<0.05	**0.47**	0.09	<0.05	0.09	<0.05	<0.05	0.08	0.14	<0.05
1-Methylnaphthalene	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1&2-Methylnaphthalene	0.99	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05
Naphthalene	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	6.2	<0.05	0.11	<0.05	<0.05	0.44	0.08	1.54	0.15	0.08	0.10	<0.05	<0.05	0.14	0.18	0.08
Pyrene	78	0.12	0.16	<0.05	<0.05	0.75	<0.05	1.98	0.30	1.16	0.35	<0.05	<0.05	0.19	0.30	0.08

All soil concentrations reported in µg/g.
'<' = Parameter below detection limit, as indicated
'NV'= No value
Bold Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.

Sample ID	MOECC (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH1-SS1	DUP01010 (Dup of BH1-SS1)
Lab ID		2562503	2570934
Sampling Date		26-May-21	26-May-21
Soil Sample Depth (m)		0.0-0.61	0.0-0.61
Consultant		BIG	BIG
Laboratory		AGAT	AGAT
Certificate of Analysis		21T756718	21T757586
Total Polychlorinated Biphenyls	0.35	<0.1	<0.1

All soil concentrations reported in µg/g.
'<' = Parameter below detection limit, as indicated
'NV'= No value
Bold Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.

Sample ID	MOECC (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH101-S2	BH102-S2	BH103-S1	BH103-S6 (Dup of BH103-S1)	BH103-S5	BH1-SS2	BH1-SS6	BH2-SS2	BH2-SS6	BH2A-SS6	BH2B-SS6	BH2C-SS6	BH3-SS2	BH4-SS2	BH4-SS6
Lab ID		Q36494	Q36496	Q36498	Q36501	Q36500	2562504	2562505	2562506	2562507	2662064	2701569	2662068	2562508	2562580	2562581
Sampling Date		2-Jan-07	2-Jan-07	2-Jan-07	2-Jan-07	2-Jan-07	26-May-21	26-May-21	26-May-21	26-May-21	25-Jun-21	06-Jul-21	25-Jun-21	31-May-21	31-May-21	31-May-21
Soil Sample Depth (m)		0.8-1.4	08-1.4	0.0-0.6	0.0-0.6	3.1-3.7	0.76-1.37	4.57-5.18	0.76-1.37	3.81-4.42	3.81-4.42	3.81-4.42	3.81-4.42	0.76-1.37	0.76-1.37	4.57-5.18
Consultant		Trow	Trow	Trow	Trow	Trow	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		Maxxam	Maxxam	Maxxam	Maxxam	Maxxam	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis		A700246	A700246	A700246	A700246	A700246	21T756718	21T756718	21T756718	21T756718	21T766734	21T770672	21T766738	21T756718	21T756718	21T756718
Antimony	7.5	<0.2	0.4	0.3	0.2	-	<0.8	<0.8	<0.8	<0.8	-	-	-	<0.8	<0.8	<0.8
Arsenic	18	4	4	5	4	-	5	5	8	4	-	-	-	6	5	4
Barium	390	74	160	74	65	-	103	37.3	212	35.0	-	-	-	76.9	48.5	58.2
Beryllium	4	0.4	0.5	0.5	0.4	-	0.5	<0.4	0.8	<0.4	-	-	-	0.6	0.6	0.9
Boron (Total)	120	-	-	-	-	-	13	10	24	19	-	-	-	11	12	37
Boron (Hot water soluble)	1.5	-	-	-	-	-	0.44	0.13	1.07	0.57	-	-	-	0.77	0.30	0.24
Cadmium	1.2	0.5	<0.1	0.2	0.3	-	0.7	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5
Chromium (total)	160	12	16	15	12	-	13	9	23	11	-	-	-	14	13	25
Chromium VI	8	-	-	-	-	-	<0.2	<0.2	<0.2	<0.2	-	-	-	<0.2	<0.2	<0.2
Cobalt	22	5.9	9.8	7.9	6.5	-	6.3	4.6	12.6	2.9	-	-	-	6.7	6.9	14.0
Copper	140	24	12	33	29	-	22.2	36.8	9.7	12.6	-	-	-	24.5	24.4	10.3
Lead	120	22	12	29	34	-	89	7	16	35	-	-	-	79	24	8
Mercury	0.27	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	-	-	-	0.12	<0.10	<0.10
Molybdenum	6.9	<0.5	0.9	0.6	0.6	-	1.1	<0.5	1.1	0.7	-	-	-	0.7	0.6	0.6
Nickel	100	12	21	17	14	-	12	8	26	6	-	-	-	13	13	29
Selenium	2.4	<0.5	<0.5	<0.5	<0.5	-	<0.8	<0.8	<0.8	<0.8	-	-	-	<0.8	<0.8	<0.8
Silver	20	<0.2	<0.2	<0.2	<0.2	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5
Thallium	1	0.06	0.05	0.08	0.07	-	<0.5	<0.5	<0.5	<0.5	-	-	-	<0.5	<0.5	<0.5
Uranium	23	-	-	-	-	-	0.57	<0.50	0.90	0.76	-	-	-	0.56	0.51	0.72
Vanadium	86	21	22	22	19	-	21.3	16.2	29.8	18.3	-	-	-	23.4	21.4	31.1
Zinc	340	310	58	78	120	-	312	41	80	165	-	-	-	141	86	65
Electrical Conductivity (mS/cm)	0.7	-	-	-	-	-	**1.63**	0.437	0.365	**1.27**	-	-	-	**1.07**	**1.09**	0.468
Sodium Adsorption Ratio (unitless)	5	-	-	-	-	-	**23.2**	2.21	**7.17**	0.363	-	-	-	3.88	**13.3**	0.831
Free Cyanide	0.051	-	-	-	-	-	<0.040	<0.040	<0.040	<0.040	-	-	-	<0.040	<0.040	<0.040
pH (pH units)	5-9 (surface soil); 5-11 (subsurface soil)	7.23	-	-	-	7.75	8.17	7.97	8.45	11.37	10.7	11.6	10.8	8.22	8.46	7.81

All soil concentrations reported in µg/g.
'<' = Parameter below detection limit, as indicated
'NV'= No value
Bold Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.
pH level outside of the acceptable MOECC range

Sample ID	MOECC (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH4-SS8	DUP04070 (Dup of BH4-SS8)	BH5-SS3	BH6-SS2	BH6-SS8	BH7-SS2	BH7-SS5	BH8-SS3	BH8-SS7
Lab ID		2562582	2570933	2585860	2562584	2562585	2585867	2585868	2570930	2570931
Sampling Date		31-May-21	31-May-21	02-Jun-21	02-Jun-21	02-Jun-21	02-Jun-21	02-Jun-21	2-Jun-21	2-Jun-21
Soil Sample Depth (m)		7.62-8.23	7.62-8.23	1.52-2.13	0.76-1.37	7.62-8.23	0.76-1.37	3.05-3.66	1.52-2.13	6.10-6.71
Consultant		BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis		21T756718	21T757586	21T759349	21T756718	21T756718	21T759349	21T759349	21T757586	21T757586
Antimony	7.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	9	7	6	6	6	5	4	6	9
Barium	390	191	174	157	125	66.3	184	163	66.1	132
Beryllium	4	0.6	0.5	0.8	0.5	0.5	0.6	0.8	0.5	0.5
Boron (Total)	120	16	9	27	16	19	18	27	9	10
Boron (Hot water soluble)	1.5	0.13	0.14	0.95	0.54	0.14	0.59	0.2	0.2	<0.10
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium (total)	160	18	14	21	17	16	19	27	16	14
Chromium VI	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cobalt	22	9.8	8.3	10.7	8.0	8.8	8.7	14.4	7.4	8.6
Copper	140	77.8	73.2	15	27.7	30.6	25	14.9	46.2	68.8
Lead	120	13	10	14	35	19	27	8	16	11
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Molybdenum	6.9	1.4	0.8	0.8	0.7	<0.5	1.1	0.5	<0.5	0.7
Nickel	100	21	16	22	16	17	18	30	15	18
Selenium	2.4	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	23	0.82	0.58	0.94	0.72	0.53	0.62	0.68	0.51	0.66
Vanadium	86	26.5	26.5	34	26.7	26.6	28	34.4	30.3	24.9
Zinc	340	61	55	66	122	69	172	70	70	50
Electrical Conductivity (mS/cm)	0.7	0.227	0.155	**0.913**	**2.28**	0.354	**1.93**	**0.824**	0.3	0.126
Sodium Adsorption Ratio (unitless)	5	1.65	1.03	**10.9**	**25.3**	2.20	**39.1**	**10.4**	4.21	0.517
Free Cyanide	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
pH (pH units)	5-9 (surface soil); 5-11 (subsurface soil)	7.93	8.08	8.35	7.95	7.75	8.11	7.91	7.84	8.02

All soil concentrations reported in µg/g.
'<' = Parameter below detection limit, as indicated
'NV'= No value
Bold Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.
pH level outside of the acceptable MOECC range

Sample ID	MOECC (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition All Types of Land Use (coarse textured soil)	MW2	MW3	DUP30 (Dup of MW3)	MW4	MW7	MW8	Trip Blank
Lab ID		2597848	2597851	2597860	2597852	2597858	2597859	
Sampling Date		11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21
Screen Depth Interval (m)		9.2-12.2	12.2-15.2	12.2-15.2	18.3-21.3	19.8-22.9	10.7-13.7	-
Consultant		BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis		21T760178	21T760178	21T760178	21T760178	21T760178	21T760178	21T760178
PHC F1 (C6-C10)	750	<25	<25	<25	<25	<25	<25	<25
PHC F1 (C6-C10) - BTEX	750	<25	<25	<25	<25	<25	<25	<25
PHC F2 (C10-C16)	150	<100	<100	<100	<100	<100	<100	<100
PHC F3 (C16-C34)	500	<100	<100	<100	<100	<100	<100	<100
PHC F4 (C34-C50)	500	<100	<100	<100	<100	<100	<100	<100
Reached baseline at C50?	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PHC F4 (C34-C50)-gravimetric	500	-	-	-	-	-	-	-

All groundwater concentrations reported in µg/L.
'<' = Parameter below detection limit, as indicated
'NV'= No value
Bold Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.

Sample ID	MOECC (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition All Types of Land Use (coarse textured soil)	MW101	MW104 (Dup of MW101)	MW102	MW103	MW2	MW3	DUP30 (Dup of MW3)	MW4	MW5	MW6	MW7	MW8	Trip Blank
Lab ID		Q39058	Q39061	Q39059	Q39060	2597848	2597851	2597860	2597852	2597853	2597857	2597858	2597859	2597862
Sampling Date		3-Jan-07	3-Jan-07	3-Jan-07	3-Jan-07	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21
Screen Depth Interval (m)		3.7-6.7	3.7-6.7	4.6-7.6	1.5-4.6	9.1-12.2	12.2-15.2	12.2-15.2	18.3-21.3	10.7-13.7	9.1-12.2	19.8-22.9	10.7-13.7	-
Consultant		Trow	Trow	Trow	Trow	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		Maxxam	Maxxam	Maxxam	Maxxam	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis		A700940	A700940	A700940	A700940	21T760178	21T760178	21T760178	21T760178	21T760178	21T760178	21T760178	21T760178	21T760178
Acetone	130000	33	33	<10	<10	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<4.0	<2.0	<1.0
Benzene	44	0.2	0.2	0.2	<0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
Bromodichloromethane	85000	<0.1	<0.1	<0.1	<0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
Bromoform	380	<0.2	<0.2	<0.2	<0.2	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.40	<0.20	<0.10
Bromomethane	5.6	<0.5	<0.5	<0.5	<0.5	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
Carbon Tetrachloride	0.79	<0.1	<0.1	<0.1	<0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.79	<0.40	<0.20
Chlorobenzene	630	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.40	<0.20	<0.10
Chloroform	2.4	<0.1	<0.1	<0.1	<0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
Dibromochloromethane	82000	<0.2	<0.2	<0.2	<0.2	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.40	<0.20	<0.10
1,2-Dichlorobenzene	4600	<0.2	<0.2	<0.2	<0.2	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.40	<0.20	<0.10
1,3-Dichlorobenzene	9600	<0.2	<0.2	<0.2	<0.2	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.40	<0.20	<0.10
1,4-Dichlorobenzene	8	<0.2	<0.2	<0.2	<0.2	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.40	<0.20	<0.10
Dichlorodifluoromethane	4400	-	-	-	-	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
1,1-Dichloroethane	320	<0.1	<0.1	<0.1	<0.1	<0.30	<0.30	<0.30	<0.60	<0.30	<0.30	<1.20	<0.60	<0.30
1,2-Dichloroethane	1.6	<0.1	<0.1	<0.1	<0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
1,1-Dichloroethylene	1.6	<0.1	<0.1	<0.1	<0.1	<0.30	<0.30	<0.30	<0.60	<0.30	<0.30	<1.20	<0.60	<0.30
cis-1,2-Dichloroethylene	1.6	<0.1	<0.1	<0.1	<0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
trans-1,2-Dichloroethylene	1.6	<0.1	<0.1	<0.1	<0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
1,2-Dichloropropane	16	<0.1	<0.1	<0.1	<0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
cis-1,3-Dichloropropene	5.2	<0.2	<0.2	<0.2	<0.2	<0.30	<0.30	<0.30	<0.60	<0.30	<0.30	<0.30	<0.60	<0.30
trans-1,3-Dichloropropene	5.2	<0.2	<0.2	<0.2	<0.2									
Ethylbenzene	2300	0.1	0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.40	<0.20	<0.10
Ethylene Dibromide (1,2-Dibromoethane	0.25	<0.2	<0.2	<0.2	<0.2	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.25	<0.20	<0.10
Hexane (n)	51	-	-	-	-	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
Methylene chloride (Dichloromethane)	610	<0.5	<0.5	<0.5	<0.5	<0.30	<0.30	<0.30	<0.60	<0.30	<0.30	<1.20	<0.60	<0.30
Methyl ethyl ketone (2-Butanone)	470000	<5	<5	<5	<5	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<4.0	<2.0	<1.0
Methyl Isobutyl Ketone	140000	<5	<5	<5	<5	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<4.0	<2.0	<1.0
Methyl t-butyl ether (MTBE)	190	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
Styrene	1300	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.40	<0.20	<0.10
1,1,1,2-Tetrachloroethane	3.3	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.40	<0.20	<0.10
1,1,2,2-Tetrachloroethane	3.2	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.40	<0.20	<0.10
Tetrachloroethylene	1.6	<0.1	<0.1	<0.1	0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
Toluene	18000	0.4	0.4	0.4	<0.2	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
1,1,1-Trichloroethane	640	<0.1	<0.1	<0.1	<0.1	<0.30	<0.30	<0.30	<0.60	<0.30	<0.30	<1.20	<0.60	<0.30
1,1,2-Trichloroethane	4.7	<0.2	<0.2	<0.2	<0.2	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
Trichloroethylene	1.6	<0.1	<0.1	<0.1	<0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
Trichlorofluoromethane	2500	-	-	-	-	<0.40	<0.40	<0.40	<0.80	<0.40	<0.40	<1.60	<0.80	<0.40
Vinyl Chloride	0.5	<0.2	<0.2	<0.2	<0.2	<0.17	<0.17	<0.17	<0.34	<0.17	<0.17	<0.50	<0.34	<0.17
m-Xylene + p-Xylene	NV	0.4	0.4	0.2	0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.80	<0.40	<0.20
o-Xylene	NV	0.2	0.2	0.1	<0.1	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.40	<0.20	<0.10
Xylenes (total)	4200	0.6	0.5	0.3	0.1	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.20	<0.40	<0.20

All groundwater concentrations reported in µg/L.
'<' = Parameter below detection limit, as indicated
'NV'= No value
Bold Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.

Samle ID	MOECC (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition All Types of Land Use (coarse textured soil)	MW2	MW3	DUP30 (Dup of MW3)	MW4	MW7	MW8
Lab ID		2597848	2597851	2597860	2597852	2597858	2597859
Sampling Date		11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21
Screen Depth Interval (m)		9.1-12.2	12.2-15.2	12.2-15.2	18.3-21.3	19.8-22.9	10.7-13.7
Consultant		BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis		21T760178	21T760178	21T760178	21T760178	21T760178	21T760178
Acenaphthene	600	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	1.8	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Anthracene	2.4	0.14	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)anthracene	4.7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)pyrene	0.81	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	0.75	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(ghi)perylene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(k)fluoranthene	0.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chrysene	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dibenz(a,h)anthracene	0.52	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluoranthene	130	0.32	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	400	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1-Methylnaphthalene	-	-	-	-	-	-	-
2-Methylnaphthalene	-	-	-	-	-	-	-
1&2-Methylnaphthalene	1800	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Naphthalene	1400	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	580	0.25	<0.10	<0.10	<0.10	<0.10	<0.10
Pyrene	68	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

All groundwater concentrations reported in µg/L.
'<' = Parameter below detection limit, as indicated
'NV'= No value
Bold Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.

Sample ID	MOECC (2011) Table 3: Full Depth Generic SCS in a Non-Potable Groundwater Condition All Types of Land Use (coarse textured soil)	MW101	MW104 (Dup of MW103)	MW102	MW103	MW2	MW3	DUP30 (Dup of MW3)	MW4	MW7		MW8
Lab ID		Q42343	Q42346	Q42344	Q42345	2597848	2597851	2597860	2597852	2597858	2676936	2597859
Sampling Date		07-Jan-07	07-Jan-07	07-Jan-07	07-Jan-07	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	11-Jun-21	29-Jun-21	11-Jun-21
Screen Depth Interval (m)		3.7-6.7	3.7-6.7	4.6-7.6	1.5-4.6	9.1-12.2	12.2-15.2	12.2-15.2	18.3-21.3	19.8-22.9	19.8-22.9	10.7-13.7
Consultant		Trow	Trow	Trow	Trow	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		Maxxam	Maxxam	Maxxam	Maxxam	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT	AGAT
Certificate of Analysis		A701775	A701775	A701775	A701775	21T760178	21T760178	21T760178	21T760178	21T760178	21T768030	21T760178
Antimony	20000	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	1900	<1	<1	<5	<5	5	6.4	7.2	7.9	35.8	<1.0	13.2
Barium	29000	95	97	35	110	26.1	37	35.6	59.2	178	49.8	84
Beryllium	67	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Boron (Total)	45000	120	120	120	190	53.3	77	85.9	3231.4	5475.2	146	108
Cadmium	2.7	0.3	0.3	0.2	<0.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium (total)	810	<5	<5	<5	<5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chromium VI	140	-	-	-	-	<2.000	<2.000	<2.000	<2.000	<2.000	<2	<2.000
Cobalt	66	9	9	5	<3	<0.50	<0.50	<0.50	<0.50	0.8	<0.50	<0.50
Copper	87	7	2	3	2	<1.0	<1.0	<1.0	<1.0	<1.0	3.1	1.5
Lead	25	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	0.61	<0.50	<0.50
Mercury	0.29	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Molybdenum	9200	34	33	47	4	1	<0.50	0.65	16.7	29.7	1.04	0.65
Nickel	490	13	12	8	<5	<3.0	<3.0	<3.0	<3.0	3.9	5.9	<3.0
Selenium	63	<2	<2	<2	<2	<1.0	<1.0	<1.0	<1.0	**181**	<1.0	1.4
Silver	1.5	<0.1	<0.1	<0.1	<0.1	0.24	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	510	<0.05	<0.05	<0.05	<0.05	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Uranium	420	-	-	-	-	0.63	0.56	<0.50	1.36	6.23	0.8	1.02
Vanadium	250	2	<1	<5	<5	<0.40	<0.40	<0.40	0.73	0.64	<0.40	0.46
Zinc	1100	49	26	38	22	<5.0	<5.0	<5.0	9	<5.0	<5.0	<5.0
Sodium	2300000	-	-	-	-	64,100	88,900	92,200	307,000	**3,590,000**	223,000	155,000
Chloride	2300000	-	-	-	-	77,400	186,000	186,000	562,000	**13,400,000**	458,000	303,000
Free Cyanide	66	-	-	-	-	<2	<2	<2	<2	<2	<2	<2

All groundwater concentrations reported in µg/L.
'<' = Parameter below detection limit, as indicated
'NV'= No value
Bold Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.
Parameter detected and no SCS provided

Appendix C – Borehole Logs

RECORD OF BOREHOLE No. BH/MW1

Project Number:	BIGC-ENV-462A	Drilling Location:	See Borehole Location Plan	Logged by:	KK
Project Client:	Camarro Developments Inc.	Drilling Method:	150 mm SSA+HSA	Compiled by:	KK
Project Name:	Preliminary Geotechnical Investigation	Drilling Machine:	Truck Mounted Drill	Reviewed by:	SS
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	26 May 21	Date Completed: 26 May 21	Revision No.: 0, 15/6/21

Geodetic Ground Surface Elevation: 103.48 m

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 50 mm Asphalt over 250 mm Granular 103.18 / 0.3	SS	1	67	19	0	103		10		
	FILL: silty sand, trace clay, trace gravel, trace rootlets, brown, moist, compact - rock	SS	2	70	20	1	102		12		
	- very moist, loose 101.19	SS	3	67	8	2	101		9		
	SILTY SAND TILL: trace to some clay, trace gravel, fragments of shale, reddish brown, moist to very moist, dense to very dense 2.3	SS	4	62	34	3	100		9		
		SS	5	84	53	4	99		9		
	- compact	SS	6	84	18	5	98		9		
	97.39					6	97				
	SAND: trace silt, trace gravel, brown, very moist, compact 6.1 / 96.78	SS	7	84	19				4		
	End of Borehole 6.7										

Notes:
1. Borehole open and dry upon completion of drilling.
2. Borehole dry on June 10,2021.

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Groundwater depth on completion of drilling: Dry m.

Groundwater depth observed on 10/06/2021 at a depth of: Dry m.

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'.

RECORD OF BOREHOLE No. BH/MW2

Project Number:	BIGC-ENV-462A	Drilling Location:	See Borehole Location Plan	Logged by:	KK
Project Client:	Camarro Developments Inc.	Drilling Method:	150 mm SSA+HSA	Compiled by:	KK
Project Name:	Preliminary Geotechnical Investigation	Drilling Machine:	Truck Mounted Drill	Reviewed by:	SS
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	26 May 21	Date Completed: 27 May 21	Revision No.: 0, 15/6/21

Geodetic Ground Surface Elevation: 104.11 m

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
	ASPHALT: 50 mm Asphalt over 250 mm Granular 103.81 / 0.3	SS	1	46	11	1	103		9		
	FILL: silty clay, trace sand, trace gravel, reddish brown, moist, stiff to hard	SS	2	79	15				11		
		SS	3	89	79	2	102		11		
		SS	4	0	50/3			50 / 3			
	- rubble					3	101				
	- silty sand, trace clay, trace gravel, reddish brown, very moist to wet, loose	SS	5	70	9				39		
	- sand and gravel, wet, grey, very dense	SS	6	62	42	4	100		20		
	- light weight concrete	SS	7	87	12	5	99				
	98.02					6	98				
	SILTY CLAY/ CLAYEY SILT TILL: trace sand, trace gravel, fragments of shale, reddish brown, moist, stiff to very stiff 6.1	SS	8	100	14				18		
		SS	9	100	13	7	97		21		
		SS	10	62	22	8	96				
	93.45					9	95		24		
	SAND: trace clay, trace silt, trace gravel, reddish brown, moist, compact 10.7	SS	11	62	23	10	94				
	91.92					11	93		9		
	SILTY CLAY/ CLAYEY SILT TILL: trace sand, trace gravel, fragments of shale, reddish brown, moist, stiff to hard 12.2	SS	12	95	13	12	92		20		
	----- grey	SS	13	95	47	13	91		15		
		SS	14	95	55	14	90		8		
	----- reddish brown	SS	15	65	50/8	15	89	50 / 8	12		
	85.83					16	88				
	BEDROCK: Shale, highly weathered, reddish brown, moist, hard 18.3	SS	16	60	50/5	17	87	50 / 5	10		
	84.27					18	86				
	End of Borehole 19.8	SS	17	100	50/3	19	85	50 / 3	16		

Notes:
1. Borehole open and dry upon completion of drilling.
3. Groundwater level reading at 10.91 m bgs on June 10, 2021.

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▽ Groundwater depth on completion of drilling: Dry m.

▼ Groundwater depth observed on 10/06/2021 at a depth of: 10.91 m.

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'.

RECORD OF BOREHOLE No. BH/MW3

Project Number:	BIGC-ENV-462A	Drilling Location:	See Borehole Location Plan	Logged by:	KK
Project Client:	Camarro Developments Inc.	Drilling Method:	150 mm SSA+HSA	Compiled by:	KK
Project Name:	Preliminary Geotechnical Investigation	Drilling Machine:	Truck Mounted Drill	Reviewed by:	SS
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	31 May 21	Date Completed: 31 May 21	Revision No.: 0, 15/6/21

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation: 104.41 m	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 over 200 mm Granular 104.11 / 0.3	SS	1	38	12	0	104		10		
	FILL: silty sand, trace clay, trace gravel, occasional fragments of Asphalt, reddish brown, moist, very loose to compact	SS	2	41	4	1	103		10		
	- 150 mm thick layer of Asphalt	SS	3	67	16	2	102		8		
		SS	4	5	2	3	101		32		
	- clayey silt, trace to some sand, trace gravel, fragments of Asphalt, grey, firm	SS	5	8	5	4	100		51		
	- possible rock/boulder	SS	6	23	50/13	5	99	50 / 13	8		
	98.32					6	98				
	SILTY SAND: trace gravel, reddish brown, wet, compact 6.1 / 96.79	SS	7	33	12	7	97		22		
	SILTY CLAY/ CLAYEY SILT TILL: trace sand, trace gravel, reddish brown, moist, stiff 7.6 / 95.27	SS	8	87	17	8	96		20		
	SAND: trace silt, trace gravel, reddish brown, moist, dense 9.1 / 91.91	SS	9	70	31	9	95		7		
		SS	10	54	35	10	94		4		
						11	93				
		SS	11	75	12	12	92		19		
	SILTY CLAY/ CLAYEY SILT TILL: trace sand, trace gravel, reddish brown, very moist, stiff to hard 12.5					13	91				
	------- grey	SS	12	67	49	14	90		13		
	88.57	SS	13	95	50	15	89		13		
	End of Borehole 15.8										

Notes:
1. Borehole open upon completion of drilling.
2. Ground water level reading at 12.19 m bgs upon completion of drilling.
3. Groundwater level reading at 11.89 m bgs on June 10, 2021.

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▽ Groundwater depth on completion of drilling: 12.19 m.

▼ Groundwater depth observed on 10/06/2021 at a depth of: 11.89 m.

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'.

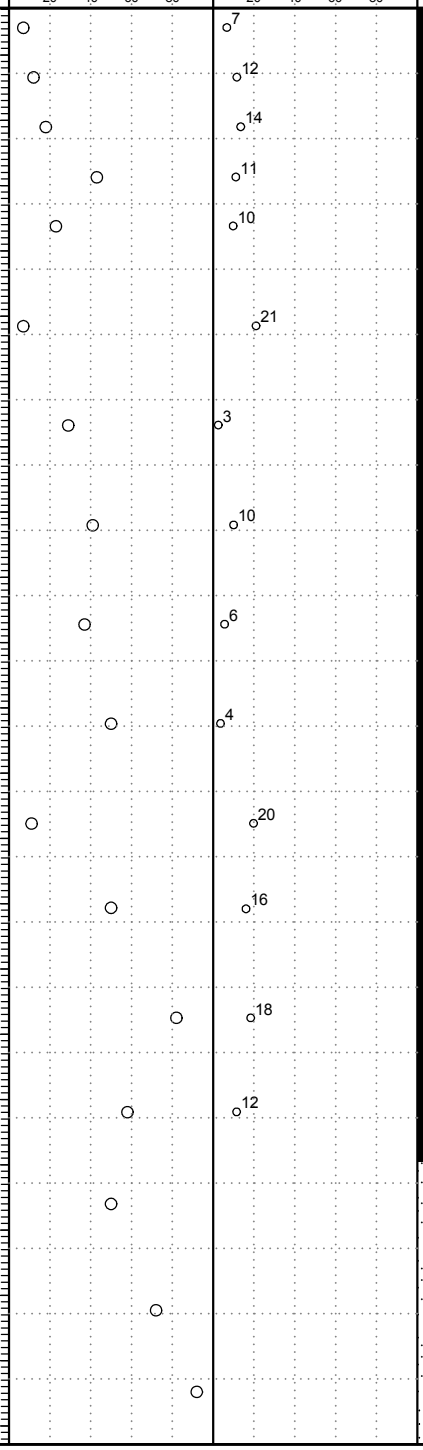
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RECORD OF BOREHOLE No. BH/MW4

Project Number:	BIGC-ENV-462A	Drilling Location:	See Borehole Location Plan	Logged by:	KK
Project Client:	Camarro Developments Inc.	Drilling Method:	150 mm SSA+HSA	Compiled by:	KK
Project Name:	Preliminary Geotechnical Investigation	Drilling Machine:	Truck Mounted Drill	Reviewed by:	SS
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	31 May 21	Date Completed: 1 Jun 21	Revision No.: 0, 15/6/21

Geodetic Ground Surface Elevation: 103.72 m

DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)
ASPHALT: 50 mm Asphalt over 200 mm Granular (103.47 / 0.3)	SS	1	8	7		
FILL: sand and gravel, trace clay, brown, moist, loose - silty sand, trace clay, trace gravel, occassional fragments of brick and concrete, reddish brown, compact	SS	2	62	12	1	103
silty clay,trace sand, trace gravel, reddish brown, moist, very stiff to hard	SS	3	75	18	2	102
occasional pieces of concrete and brick, grey	SS	4	87	43	3	101
- wood pieces	SS	5	79	23	4	100
99.15						
SILTY CLAY/ CLAYEY SILT TILL: trace sand, trace gravel, reddish brown, moist, firm (4.6)	SS	6	87	7	5	99
97.63						
SAND: some gravel, trace silt, grey, moist, compact to dense (6.1)	SS	7	51	29	6	98
					7	97
	SS	8	62	41	8	96
					9	95
	SS	9	62	37	10 ▼	94
	SS	10	62	50	11	93
91.53					12	92
SILTY CLAY/ CLAYEY SILT TILL: trace to some sand, trace gravel, reddish brown, moist to wet, stiff to hard (12.2)	SS	11	54	11	13	91
------- grey	SS	12	20	50	14	90
					15	89
	SS	13	100	82	16	88
	SS	14	81	58	17	87
85.44					18	86
BEDROCK: Shale, highly weathered to excellent quality, occasional limestone layers, reddish brown to grey, damp to moist (18.3)	SS	15	63	50	19	85
ROCK CORE BEGINS	RC	1	97	72	20	84
- Fair Quality						
- Excellent Quality	RC	2	100	92	21	83
					22	82



INSTRUMENTATION INSTALLATION

COMMENTS

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No freestanding groundwater measured in open borehole on completion of drilling.

Groundwater depth observed on 10/06/2021 at a depth of: 9.97 m.

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'.

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RECORD OF BOREHOLE No. BH/MW4

Project Number: **BIGC-ENV-462A** Drilling Location: **See Borehole Location Plan** Logged by: **KK**

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 quality, occasional limestone layers, reddish brown to grey, damp to moist - Excellent Quality	RC	3	99	98	23	81	○			
	- Excellent Quality	RC	4	94	91	24	80	○			
	78.74						79				
	End of Borehole 25.0										
	Notes: 1. Borehole open upon completion of drilling. 2. Ground water level not measured upon completion of drilling due introduced drilling water. 3. Groundwater level reading at 9.97 m bgs on June 10, 2021.										

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'.

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RECORD OF BOREHOLE No. BH/MW5

Project Number:	BIGC-ENV-462A	Drilling Location:	See Borehole Location Plan	Logged by:	KK
Project Client:	Camarro Developments Inc.	Drilling Method:	150 mm SSA+HSA	Compiled by:	KK
Project Name:	Preliminary Geotechnical Investigation	Drilling Machine:	Track Mounted Drill	Reviewed by:	SS
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	2 Jun 21	Date Completed: 2 Jun 21	Revision No.: 0, 15/6/21

Lithology Plot	DESCRIPTION (Geodetic Ground Surface Elevation: 102.64 m)		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT: 50 mm Asphalt over 200 mm Granular	102.39 0.3	SS	1	70	11			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		
	FILL: silty clay/ clayey silt, trace sand, trace gravel, reddish brown, moist, stiff to hard		SS	2	33	37	1	102				
			SS	3	87	49	2	101				
	- sand and gravel, grey, moist, very dense		SS	4	74	50/15	3	100				
			SS	5	95	11	4	99				
	- NO RECOVERY		SS	6	0	1	5	98				
		96.55					6	97				
	SILTY CLAY/ CLAYEY SILT TILL: trace sand, trace gravel, reddish brown, moist to wet, very soft to soft	6.1	SS	7	95	2	7	96				
			SS	8	95	5	8	95				
			SS	9	95	4	9	94				
		91.98					10	93				
	SAND: some gravel, trace clay, trace silt, reddish brown, wet, compact	10.7	SS	10	67	16	11	92				
		90.45					12	91				
	SILTY CLAY/ CLAYEY SILT TILL: trace to some sand, trace gravel, grey, very moist to wet, very stiff to hard	12.2	SS	11	95	25	13	90				
			SS	12	95	40	14	89				
		87.10	SS	13	83	50	15	88				Gr-10%; Sa-20%; Si-47%; Cl-22%
	End of Borehole	15.5										

Notes:
1. Borehole open upon completion of drilling.
2. Ground water level reading at 12.19 m bgs upon completion of drilling.
3. Groundwater level reading at 10.13 m bgs on June 10, 2021.

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▽ Groundwater depth on completion of drilling: 12.19 m.

▼ Groundwater depth observed on 10/06/2021 at a depth of: 10.13 m.

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'.

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RECORD OF BOREHOLE No. BH/MW6

Project Number:	BIGC-ENV-462A	Drilling Location:	See Borehole Location Plan	Logged by:	KK
Project Client:	Camarro Developments Inc.	Drilling Method:	150 mm SSA+HSA	Compiled by:	KK
Project Name:	Preliminary Geotechnical Investigation	Drilling Machine:	Track Mounted Drill	Reviewed by:	SS
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	3 Jun 21	Date Completed: 3 Jun 21	Revision No.: 0, 15/6/21

Lithology Plot	DESCRIPTION (Geodetic Ground Surface Elevation: 101.22 m)		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: 50 mm Asphalt over 200 mm Granular	100.97 0.3	SS	1	62	35		101		8		
	FILL: silty clay/ clayey silt, trace sand, trace gravel, reddish brown, moist, stiff to hard		SS	2	54	9	1	100		11		
	-------		SS	3	84	30	2			11		
	-silty sand, trace clay, trace gravel, occasional fragments of brick pieces, reddish brown, moist, dense		SS	4	84	38	3	99		9		
	-------		SS	5	95	18	4	98		10		
	- firm		SS	6	41	5	5	97		11		
		95.13					6	96				
	SILTY CLAY/ CLAYEY SILT TILL: trace sand, trace gravel, reddish brown, moist to wet, very soft to soft	6.1	SS	7	67	3	7	95		22		
			SS	8	79	0	8	94		17		
		92.08					9	93				
	SAND: trace to some gravel, trace clay, trace silt, brown, wet, compact	9.1	SS	9	33	15	10	92		11		
			SS	10	51	18	11	91		19		
		89.03					12	90				
	SILTY CLAY/ CLAYEY SILT TILL: trace sand, trace gravel, grey, wet, hard	12.2	SS	11	75	31	13	89		16		
			SS	12	67	46	14	88		12		
	- moist	85.37	SS	13	84	54	15	87		11		
	End of Borehole	15.9						86				

Notes:
1. Borehole open upon completion of drilling.
2. Ground water level reading at 12.19 m bgs upon completion of drilling.
3. Groundwater level reading at 8.71 m bgs on June 10, 2021.

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▽ Groundwater depth on completion of drilling: 12.19 m.

▼ Groundwater depth observed on 10/06/2021 at a depth of: 8.71 m.

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'.

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RECORD OF BOREHOLE No. BH/MW7

Project Number:	BIGC-ENV-462A	Drilling Location:	See Borehole Location Plan	Logged by:	KK
Project Client:	Camarro Developments Inc.	Drilling Method:	150 mm SSA+HSA	Compiled by:	KK
Project Name:	Preliminary Geotechnical Investigation	Drilling Machine:	Track Mounted Drill	Reviewed by:	SS
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	8 Jun 21	Date Completed: 9 Jun 21	Revision No.: 0, 15/6/21

Geodetic Ground Surface Elevation: 101.41 m

Depth (m)	Description	Elevation (m)	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%
	ASPHALT: 100 mm Asphalt over 200 mm Granular	101.11 / 0.3				
	FILL: silty claye, trace sand, trace gravel, occasional fragments of concrete, reddish brown, damp, very stiff to stiff	99.12	SS	1	59	23
			SS	2	59	11
			SS	3	92	15
	SILTY CLAY/ CLAYEY SILT TILL: trace sand,reddish brown, moist, stiff	2.3 / 96.84	SS	4	95	13
			SS	5	75	16
	SILTY CLAY/ CLAYEY SILT TILL: trace sand, trace gravel, reddish brown, moist, firm	4.6 / 95.32	SS	6	67	78
	SAND: trace to some gravel, trace silt, greyish brown, moist, very dense to compact	6.1 / 89.22	SS	7	67	47
			SS	8	62	38
			SS	9	67	38
			SS	10	95	11
	SILTY CLAY/ CLAYEY SILT TILL: trace to some sand, trace gravel, grey, moist, very stiff to hard	12.2 / 84.65	SS	11	70	25
			SS	12	95	48
			SS	13	77	90/28
	BEDROCK: Shale, highly weathered to excellent quality, occasional limestone layers, reddish brown to grey, damp to moist	16.8	SS	14	30	50/10
	ROCK CORE BEGINS		RC	1	83	82
	- Good Quality					
	- Excellent Quality		RC	2	100	96
	- Fair Quality		RC	3	100	72

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

Continued on Next Page

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▽ No freestanding groundwater measured in open borehole on completion of drilling.

▼ Groundwater depth observed on 10/06/2021 at a depth of: 9.19 m.

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 : 116

RECORD OF BOREHOLE No. BH/MW7

Project Number: **BIGC-ENV-462A** Drilling Location: **See Borehole Location Plan** Logged by: **KK**

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 quality, occasional limestone layers, reddish brown to grey, damp to 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		
	- Excellent Quality	RC	4	100	100	23	79				
						24	78				
	- Excellent Quality	RC	5	100	100	25	77				
	76.11										
	End of Borehole 25.3										

Notes:
1. Borehole open upon completion of drilling.
2. Ground water level not measured upon completion of drilling due introduced drilling water.
3. Groundwater level reading at 9.19 m bgs on June 10, 2021.

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 : 116

RECORD OF BOREHOLE No. BH/MW8

Project Number:	BIGC-ENV-462A	Drilling Location:	See Borehole Location Plan	Logged by:	KK
Project Client:	Camarro Developments Inc.	Drilling Method:	150 mm SSA+HSA	Compiled by:	KK
Project Name:	Preliminary Geotechnical Investigation	Drilling Machine:	Track Mounted Drill	Reviewed by:	SS
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	3 Jun 21	Date Completed: 3 Jun 21	Revision No.: 0, 15/6/21

Geodetic Ground Surface Elevation: 102.42 m

Depth (m)	Description	Elevation (m)	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	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: 50 mm Asphalt over 200 mm Granular	102.17 / 0.3								
	FILL: sand and gravel, trace clay, trace silt, occasional fragments of Asphalt, brown, moist, loose		SS	1	8	6	○	3		
	-------									
	clayey silt, trace sand, trace gravel, brown, moist, stiff		SS	2	54	9	○	12		
			SS	3	75	9	○	11		
			SS	4	95	20	○	10		
	- sand, trace to some gravel, trace clay, moist, brown, compact	99.38 / 3.0								
	SILTY CLAY/ CLAYEY SILT TILL: trace sand, reddish brown, wet, firm to very stiff		SS	5	79	6	○	28		
		97.55	SS	6	67	16	○	10		
	SAND: trace to some gravel, trace silt, brown, moist, compact to very dense	4.9								
			SS	7	62	29	○	4		
			SS	8	33	50	○	3		
	- wet		SS	9	51	75	○	5		
			SS	10	62	23	○	13		
		90.23								
	SILTY SAND TILL trace clay, trace gravel, reddish brown, wet, compact	12.2	SS	11	70	14	○	21		
		88.71								
	SILTY CLAY/ CLAYEY SILT TILL: trace to some sand, trace gravel, grey, moist, hard	13.7	SS	12	95	45	○	13		
		86.57	SS	13	95	67	○	14		Gr-4%; Sa-19%; Si-52%; Cl-25%
	End of Borehole	15.9								

Notes:
1. Borehole open upon completion of drilling.
2. Ground water level reading at 10.66 m bgs upon completion of drilling.
3. Groundwater level reading at 9.95 m bgs on June 10, 2021.

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▽ Groundwater depth on completion of drilling: 10.66 m.

▼ Groundwater depth observed on 10/06/2021 at a depth of: 9.95 m.

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'.

RECORD OF BOREHOLE No. BH2A

Project Number:	BIGC-ENV-462D	Drilling Location:	See Borehole Location Plan	Logged by:	TVH
Project Client:	Camarro Developments Inc.	Drilling Method:	100 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	Phase II ESA	Drilling Machine:	Mini Mole 140 lbs	Reviewed by:	
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	25 Jun 21	Date Completed: 25 Jun 21	Revision No.: 0, 8/7/21

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation: 104.11 m	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 PAVEMENT: 50 mm asphalt over 250 mm granular bases 103.81	SS	1	87	7	0	104	○			
	FILL: clayey silt, trace sand, trace gravel, trace rootlets, fragments of asphalt, reddish brown, moist, firm 0.3										
	- fragments of red shale, stiff	SS	2	70	9	1	103	○			
	- rubble 250 mm										
	- silty sand, trace clay, trace gravel, occasional wood chips, organic staining, dark brown, some red, very moist, very stiff	SS	3	92	28	2	102	○			
	- clayey silt, trace sand, trace gravel, reddish brown, very moist, very stiff	SS	4	92	22			○			
	- rubble 50 mm - 75 mm thick layer of asphalt					3					
	- silty sand, trace clay, trace gravel, reddish brown, wet, very stiff	SS	5	95	18		101	○			
	- light weight concrete										
	- rubble 100 mm	SS	6	95	27	4	100	○			pH
	- clayey silt, trace sand, trace gravel, reddish brown, very moist, very stiff 98.93	SS	7	100	14	5	99	○			
	End of Borehole 5.2										

Notes:
1. Borehole open and dry upon completion of drilling.

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▽ Groundwater depth on completion of drilling: Dry m.

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'.

RECORD OF BOREHOLE No. BH2B

Project Number:	BIGC-ENV-462D	Drilling Location:	See Borehole Location Plan	Logged by:	TVH
Project Client:	Camarro Developments Inc.	Drilling Method:	100 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	Phase II ESA	Drilling Machine:	Mini Mole 140 lbs	Reviewed by:	
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	25 Jun 21	Date Completed: 25 Jun 21	Revision No.: 0, 8/7/21

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation: 104.11 m	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 PAVEMENT: 50 mm asphalt over 150 mm granular bases 0.2	SS	1	59	15	0	104				
	FILL: clayey silt, trace sand, trace gravel, reddish brown, moist, very stiff										
		SS	2	100	18	1	103				
	- fragments of asphalt - some fragments of concrete and brick, hard	SS	3	79	62	2	102				
		SS	4	75	12						
	- silty sand, trace clay, some gravel, fragments of asphalt, dark brown, moist, stiff					3	101				
	- 25 mm thick layer of asphalt over 75 mm granular - very moist to wet, light grey, very stiff	SS	5	100	20						
		SS	6	100	16	4	100				pH
	- reddish brown - sand and gravel, grey, moist to very moist - clayey silt, trace sand seams, trace gravel, layered light grey to reddish brown, wet, stiff 98.93	SS	7	100	11	5	99				
	End of Borehole 5.2										

Notes:
1. Borehole open upon completion of drilling.
2. Ground water level reading at 4.27 m bgs upon completion of drilling.

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▽ Groundwater depth on completion of drilling: 4.27 m.

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'.

RECORD OF BOREHOLE No. BH2C

Project Number:	BIGC-ENV-462D	Drilling Location:	See Borehole Location Plan	Logged by:	TVH
Project Client:	Camarro Developments Inc.	Drilling Method:	100 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	Phase II ESA	Drilling Machine:	Mini Mole 140 lbs	Reviewed by:	
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	25 Jun 21	Date Completed: 25 Jun 21	Revision No.: 0, 8/7/21

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
	Geodetic Ground Surface Elevation: 104.11 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		
	ASPHALT PAVEMENT: 50 mm asphalt over 150 mm granular bases (103.91 / 0.2)	SS	1	75	11			○			
	FILL: clayey silt, trace sand, some gravel, reddish brown, moist, stiff										
	- shale fragments	SS	2	70	17	1	103	○			
	- trace gravel, brown, very stiff - silty sand, trace clay, trace gravel, brown, moist to very moist, very stiff	SS	3	100	19			○			
	- wet					2	102				
	- clayey silt, trace sand, some gravel, reddish brown, very moist, stiff	SS	4	41	9			○			
	- sand and gravel, grey, wet, very stiff to hard	SS	5	92	30	3	101	○			
		SS	6	84	40	4	100	○			pH
	- silty sand, trace clay, trace gravel, brown, wet, stiff - sand and gravel, grey, wet, stiff	SS	7	100	9	5 ▽	99	○			
	- clayey silt, trace sand, trace gravel, layered light grey to grey, wet, stiff (98.93 / 5.2)										
	End of Borehole										

Notes:
1. Borehole open upon completion of drilling.
2. Ground water level reading at 4.87 m bgs upon completion of drilling.

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▽ Groundwater depth on completion of drilling: 4.88 m.

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'.

RECORD OF BOREHOLE No. BH3A

Project Number:	**BIGC-ENV-462D**	Drilling Location:	**See Borehole Location Plan**	Logged by:	**TVH**
Project Client:	**Camarro Developments Inc.**	Drilling Method:	**100 mm Solid Stem Augers**	Compiled by:	**TVH**
Project Name:	**Phase II ESA**	Drilling Machine:	**Mini Mole 140 lbs**	Reviewed by:	
Project Location:	**1062 & 1074 Cooke Boulevard, Burlington, Ontario**	Date Started:	**25 Jun 21** Date Completed: **25 Jun 21**	Revision No.:	**0, 8/7/21**

Geodetic Ground Surface Elevation: 104.41 m

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
	ASPHALT PAVEMENT: 100 mm asphalt over 200 mm granular bases 104.11	SS	1	75	12		104				
	0.3 **FILL:** clayey silt, trace to some sand, some gravel, fragments of asphalt, reddish brown, moist, stiff - firm - 150 mm thick layer of asphalt	SS	2	75	6	1	103				PAH
	- sandy silt, trace clay, some gravel, fragments of brick, brown, moist, firm - 150 mm thick layer of asphalt	SS	3	67	7	2					
	- clayey silt, trace sand, some gravel, reddish brown, very moist, stiff 101.67	SS	4	41	14		102				
	End of Borehole 2.7										

Notes:
1. Borehole open and dry 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

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Groundwater depth on completion of drilling: Dry m.

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'.

RECORD OF BOREHOLE No. BH3B

Project Number:	BIGC-ENV-462D	Drilling Location:	See Borehole Location Plan	Logged by:	TVH
Project Client:	Camarro Developments Inc.	Drilling Method:	100 mm Solid Stem Augers	Compiled by:	TVH
Project Name:	Phase II ESA	Drilling Machine:	Mini Mole 140 lbs	Reviewed by:	
Project Location:	1062 & 1074 Cooke Boulevard, Burlington, Ontario	Date Started:	25 Jun 21	Date Completed: 25 Jun 21	Revision No.: 0, 8/7/21

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation: 104.41 m	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 PAVEMENT: 50 mm asphalt over 200 mm granular bases — 104.16 — 0.3										
	FILL: sandy silt to silty sand, trace clay, some gravel, fragments of asphalt, fragments of brick, reddish brown, moist, stiff	SS	1	41	12		104				
		SS	2	51	13	1	103				PAH
	- clayey silt, trace sand, trace gravel, fragments of asphalt, brown, very moist, firm	SS	3	30	5	2					
	- sand and gravel, grey, moist, stiff						102				
	- 100 mm thick layer of asphalt — 101.67 — 2.7	SS	4	41	9						
	End of Borehole										

Notes:
1. Borehole open and dry upon completion of drilling.

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▽ Groundwater depth on completion of drilling: Dry m.

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'.

RECORD OF BOREHOLE No. BH3C

Project Number: **BIGC-ENV-462D** | Drilling Location: **See Borehole Location Plan** | Logged by: **TVH**

Project Client: **Camarro Developments Inc.** | Drilling Method: **100 mm Solid Stem Augers** | Compiled by: **TVH**

Project Name: **Phase II ESA** | Drilling Machine: **Mini Mole 140 lbs** | Reviewed by:

Project Location: **1062 & 1074 Cooke Boulevard, Burlington, Ontario** | Date Started: **25 Jun 21** | Date Completed: **25 Jun 21** | Revision No.: **0, 8/7/21**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		
Lithology Plot	DESCRIPTION Geodetic Ground Surface Elevation: 104.41 m	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 PAVEMENT: 100 mm asphalt over 100 mm granular bases 104.21 / 0.2										
	FILL: silty sand, trace clay, some gravel, fragments of brick, reddish brown, moist, very stiff	SS	1	75	22		104	○			
	- fragments of asphalt					1					
	- clayey silt, trace sand, trace gravel, dark brown, very moist, hard	SS	2	75	42		103	○			PAH
	- fragments of asphalt, moist to very moist	SS	3	38	49	2		○			
	- reddish brown, stiff 101.67	SS	4	41	6		102	○			
	End of Borehole 2.7										

Notes:
1. Borehole open and dry upon completion of drilling.

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▽ Groundwater depth on completion of drilling: Dry m.

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'.

Appendix D - Survey Plan

Appendix E - Laboratory Certificates of Analysis

AGAT Laboratories

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

ATTENTION TO: Eileen Liu

PROJECT: BIGC-ENV-462B

AGAT WORK ORDER: 21T756718

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jun 16, 2021

PAGES (INCLUDING COVER): 20

VERSION*: 2

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

Notes

VERSION 2:V2 issued 2021-06-16. Added pH re-analysis with visible concrete pieces removed for sample ID BH2-SS6/2562507. Supersedes previous version reported 2021-06-11.

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Certificate of Analysis

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-04

DATE REPORTED: 2021-06-16

SAMPLE DESCRIPTION:				BH1-SS2	BH1-SS6	BH2-SS2	BH2-SS6	BH3-SS2	BH4-SS2	BH4-SS6	BH4-SS8
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2021-05-26 12:30	2021-05-26 13:05	2021-05-26 14:35	2021-05-26 15:05	2021-05-31 09:15	2021-05-31 14:30	2021-05-31 15:05	2021-05-31 16:15
Parameter	Unit	G / S	RDL	2562504	2562505	2562506	2562507	2562508	2562580	2562581	2562582
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	5	5	8	4	6	5	4	9
Barium	µg/g	390	2.0	103	37.3	212	35.0	76.9	48.5	58.2	191
Beryllium	µg/g	4	0.4	0.5	<0.4	0.8	<0.4	0.6	0.6	0.9	0.6
Boron	µg/g	120	5	13	10	24	19	11	12	37	16
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.44	0.13	1.07	0.57	0.77	0.30	0.24	0.13
Cadmium	µg/g	1.2	0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	13	9	23	11	14	13	25	18
Cobalt	µg/g	22	0.5	6.3	4.6	12.6	2.9	6.7	6.9	14.0	9.8
Copper	µg/g	140	1.0	22.2	36.8	9.7	12.6	24.5	24.4	10.3	77.8
Lead	µg/g	120	1	89	7	16	35	79	24	8	13
Molybdenum	µg/g	6.9	0.5	1.1	<0.5	1.1	0.7	0.7	0.6	0.6	1.4
Nickel	µg/g	100	1	12	8	26	6	13	13	29	21
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	0.57	<0.50	0.90	0.76	0.56	0.51	0.72	0.82
Vanadium	µg/g	86	0.4	21.3	16.2	29.8	18.3	23.4	21.4	31.1	26.5
Zinc	µg/g	340	5	312	41	80	165	141	86	65	61
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	0.12	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	**1.63**	0.437	0.365	**1.27**	**1.07**	**1.09**	0.468	0.227
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	**23.2**	2.21	**7.17**	0.363	3.88	**13.3**	0.831	1.65
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	8.17	7.97	8.45	**11.4**	8.22	8.46	7.81	7.93

Certified By:



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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-04

DATE REPORTED: 2021-06-16

				SAMPLE DESCRIPTION:	BH6-SS2	BH6-SS8
				SAMPLE TYPE:	Soil	Soil
				DATE SAMPLED:	2021-06-02 15:20	2021-06-02 16:35
Parameter	Unit	G / S	RDL		2562584	2562585
Antimony	µg/g	7.5	0.8		<0.8	<0.8
Arsenic	µg/g	18	1		6	6
Barium	µg/g	390	2.0		125	66.3
Beryllium	µg/g	4	0.4		0.5	0.5
Boron	µg/g	120	5		16	19
Boron (Hot Water Soluble)	µg/g	1.5	0.10		0.54	0.14
Cadmium	µg/g	1.2	0.5		<0.5	<0.5
Chromium	µg/g	160	5		17	16
Cobalt	µg/g	22	0.5		8.0	8.8
Copper	µg/g	140	1.0		27.7	30.6
Lead	µg/g	120	1		35	19
Molybdenum	µg/g	6.9	0.5		0.7	<0.5
Nickel	µg/g	100	1		16	17
Selenium	µg/g	2.4	0.8		<0.8	<0.8
Silver	µg/g	20	0.5		<0.5	<0.5
Thallium	µg/g	1	0.5		<0.5	<0.5
Uranium	µg/g	23	0.50		0.72	0.53
Vanadium	µg/g	86	0.4		26.7	24.6
Zinc	µg/g	340	5		122	69
Chromium, Hexavalent	µg/g	8	0.2		<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040		<0.040	<0.040
Mercury	µg/g	0.27	0.10		<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005		**2.28**	0.354
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A		**25.3**	2.20
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA		7.95	7.75

Certified By:



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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-04 **DATE REPORTED: 2021-06-16**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T3 S RPI CT
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.

2562504-2562585 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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AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

pH Re-analysis

DATE RECEIVED: 2021-06-04 **DATE REPORTED: 2021-06-16**

				SAMPLE DESCRIPTION:	BH2-SS6
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-05-26 15:05
Parameter	**Unit**	**G / S**	**RDL**	**2562507**	
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	**11.37**	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T3 S RPI CT
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.

2562507 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

As per Client's request concrete pieces from sample were removed before the analysis.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-04

DATE REPORTED: 2021-06-16

		SAMPLE DESCRIPTION:		BH1-SS2	BH2-SS2	BH2-SS6	BH3-SS2	BH4-SS2	BH4-SS6	BH6-SS2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-05-26 12:30	2021-05-26 14:35	2021-05-26 15:05	2021-05-31 09:15	2021-05-31 14:30	2021-05-31 15:05	2021-06-02 15:20
Parameter	**Unit**	**G / S**	**RDL**	2562504	2562506	2562507	2562508	2562580	2562581	2562584
Naphthalene	µg/g	0.6	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
Acenaphthene	µg/g	7.9	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
Phenanthrene	µg/g	6.2	0.05	0.09	<0.05	<0.05	0.44	0.10	<0.05	0.14
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05	0.15	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	0.14	<0.05	<0.05	**0.78**	0.20	<0.05	0.24
Pyrene	µg/g	78	0.05	0.12	<0.05	<0.05	0.75	0.35	<0.05	0.19
Benz(a)anthracene	µg/g	0.5	0.05	<0.05	<0.05	<0.05	0.33	0.07	<0.05	0.07
Chrysene	µg/g	7	0.05	<0.05	<0.05	<0.05	0.29	0.05	<0.05	0.07
Benzo(b)fluoranthene	µg/g	0.78	0.05	0.17	<0.05	<0.05	**1.13**	0.26	<0.05	0.30
Benzo(k)fluoranthene	µg/g	0.78	0.05	0.05	<0.05	<0.05	0.41	0.06	<0.05	0.06
Benzo(a)pyrene	µg/g	0.3	0.05	0.08	<0.05	<0.05	**0.52**	0.20	<0.05	0.10
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	0.07	<0.05	<0.05	**0.42**	0.09	<0.05	0.08
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	**0.12**	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	0.06	<0.05	<0.05	0.46	0.07	<0.05	0.07
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	8.6	8.1	13.0	11.7	8.8	19.7	11.6
Surrogate	**Unit**	**Acceptable Limits**								
Naphthalene-d8	%	50-140		60	63	76	61	62	90	66
Acenaphthene-d10	%	50-140		73	69	79	64	67	94	68
Chrysene-d12	%	50-140		85	78	87	78	94	60	87

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T3 S RPI CT
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.

2562504-2562584 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

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AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-04

DATE REPORTED: 2021-06-16

				SAMPLE DESCRIPTION:	BH1-SS2	BH2-SS2	BH3-SS2	BH4-SS2	BH6-SS2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2021-05-26 12:30	2021-05-26 14:35	2021-05-31 09:15	2021-05-31 14:30	2021-06-02 15:20
Parameter	**Unit**	**G / S**	**RDL**		**2562504**	**2562506**	**2562508**	**2562580**	**2562584**
F1 (C6 - C10)	µg/g	55	5		<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10		<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10		<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50		170	<50	57	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50		169	<50	52	<50	<50
F4 (C34 to C50)	µg/g	2800	50		150	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50		NA	NA	NA	NA	NA
Moisture Content	%		0.1		8.6	8.1	11.7	8.8	11.6
Surrogate	**Unit**	**Acceptable Limits**							
Toluene-d8	% Recovery	50-140			93	78	84	93	77
Terphenyl	%	60-140			130	102	120	98	90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T3 S RPI CT
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.

2562504-2562584 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-04

DATE REPORTED: 2021-06-16

SAMPLE DESCRIPTION:				BH1-SS2	BH1-SS6	BH2-SS2	BH3-SS2	BH4-SS2	BH4-SS8	BH6-SS2	BH6-SS8
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2021-05-26 12:30	2021-05-26 13:05	2021-05-26 14:35	2021-05-31 09:15	2021-05-31 14:30	2021-05-31 16:15	2021-06-02 15:20	2021-06-02 16:35
Parameter	Unit	G / S	RDL	2562504	2562505	2562506	2562508	2562580	2562582	2562584	2562585
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	3.5	0.02	<0.02	<0.02	<0.02	<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	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	3.4	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05	<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	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	9.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04	<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	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-04 **DATE REPORTED: 2021-06-16**

		SAMPLE DESCRIPTION:		BH1-SS2	BH1-SS6	BH2-SS2	BH3-SS2	BH4-SS2	BH4-SS8	BH6-SS2	BH6-SS8
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-05-26 12:30	2021-05-26 13:05	2021-05-26 14:35	2021-05-31 09:15	2021-05-31 14:30	2021-05-31 16:15	2021-06-02 15:20	2021-06-02 16:35
Parameter	**Unit**	**G / S**	**RDL**	**2562504**	**2562505**	**2562506**	**2562508**	**2562580**	**2562582**	**2562584**	**2562585**
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.27	0.05	<0.05	<0.05	<0.05	<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	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	4.8	0.05	<0.05	<0.05	<0.05	<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	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	3.4	0.05	<0.05	<0.05	<0.05	<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	<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	<0.04	<0.04	<0.04	<0.04
n-Hexane	µg/g	2.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	8.6	10.0	8.1	11.7	8.8	7.8	11.6	15.0
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	% Recovery	50-140		84	86	86	94	85	86	90	92
4-Bromofluorobenzene	% Recovery	50-140		84	85	85	83	84	85	87	89

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T3 S RPI CT
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.

2562504-2562585 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 Popowkolof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

Total PCBs (soil)

DATE RECEIVED: 2021-06-04

DATE REPORTED: 2021-06-16

		SAMPLE DESCRIPTION:		**BH1-SS1**
		SAMPLE TYPE:		**Soil**
		DATE SAMPLED:		**2021-05-26 12:25**
Parameter	**Unit**	**G / S**	**RDL**	**2562503**
Polychlorinated Biphenyls	µg/g	0.35	0.1	<0.1
Moisture Content	%		0.1	7.8
Surrogate	**Unit**	**Acceptable Limits**		
Decachlorobiphenyl	%	60-130		100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T3 S RPI CT
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.

2562503 Results are based on the dry weight of soil extracted.

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Guideline Violation

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
2562504	BH1-SS2	ON T3 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	1.63
2562504	BH1-SS2	ON T3 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	23.2
2562506	BH2-SS2	ON T3 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	7.17
2562507	BH2-SS6	ON T3 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	1.27
2562507	BH2-SS6	ON T3 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	11.4
2562507	BH2-SS6	ON T3 S RPI CT	pH Re-analysis	pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	11.37
2562508	BH3-SS2	ON T3 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	1.07
2562508	BH3-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Benzo(a)pyrene	µg/g	0.3	0.52
2562508	BH3-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Benzo(b)fluoranthene	µg/g	0.78	1.13
2562508	BH3-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Dibenz(a,h)anthracene	µg/g	0.1	0.12
2562508	BH3-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Fluoranthene	µg/g	0.69	0.78
2562508	BH3-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.42
2562508	BH3-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)	Benzo(a)pyrene	µg/g	0.3	0.52
2562508	BH3-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)	Benzo(b)fluoranthene	µg/g	0.78	1.13
2562508	BH3-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)	Dibenzo(a,h)anthracene	µg/g	0.1	0.12
2562508	BH3-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)	Fluoranthene	µg/g	0.69	0.78
2562508	BH3-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)	Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.42
2562580	BH4-SS2	ON T3 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	1.09
2562580	BH4-SS2	ON T3 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	13.3
2562584	BH6-SS2	ON T3 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	2.28
2562584	BH6-SS2	ON T3 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	25.3

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Quality Assurance

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

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

Soil Analysis

RPT Date: Jun 16, 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	2562504	2562504	<0.8	<0.8	NA	< 0.8	137%	70%	130%	99%	80%	120%	87%	70%	130%
Arsenic	2562504	2562504	5	5	0.0%	< 1	123%	70%	130%	107%	80%	120%	106%	70%	130%
Barium	2562504	2562504	103	109	5.7%	< 2.0	105%	70%	130%	97%	80%	120%	95%	70%	130%
Beryllium	2562504	2562504	0.5	0.5	NA	< 0.4	124%	70%	130%	116%	80%	120%	117%	70%	130%
Boron	2562504	2562504	13	13	NA	< 5	102%	70%	130%	120%	80%	120%	106%	70%	130%
Boron (Hot Water Soluble)	2562504	2562504	0.44	0.49	NA	< 0.10	88%	60%	140%	95%	70%	130%	121%	60%	140%
Cadmium	2562504	2562504	0.7	0.9	NA	< 0.5	108%	70%	130%	103%	80%	120%	110%	70%	130%
Chromium	2562504	2562504	13	15	NA	< 5	101%	70%	130%	102%	80%	120%	108%	70%	130%
Cobalt	2562504	2562504	6.3	6.5	3.1%	< 0.5	103%	70%	130%	100%	80%	120%	102%	70%	130%
Copper	2562504	2562504	22.2	22.9	3.1%	< 1.0	93%	70%	130%	105%	80%	120%	99%	70%	130%
Lead	2562504	2562504	89	62	35.8%	< 1	118%	70%	130%	107%	80%	120%	97%	70%	130%
Molybdenum	2562504	2562504	1.1	1.2	NA	< 0.5	112%	70%	130%	107%	80%	120%	110%	70%	130%
Nickel	2562504	2562504	12	13	8.0%	< 1	100%	70%	130%	100%	80%	120%	96%	70%	130%
Selenium	2562504	2562504	<0.8	<0.8	NA	< 0.8	118%	70%	130%	107%	80%	120%	106%	70%	130%
Silver	2562504	2562504	<0.5	<0.5	NA	< 0.5	101%	70%	130%	104%	80%	120%	97%	70%	130%
Thallium	2562504	2562504	<0.5	<0.5	NA	< 0.5	104%	70%	130%	100%	80%	120%	98%	70%	130%
Uranium	2562504	2562504	0.57	0.58	NA	< 0.50	119%	70%	130%	107%	80%	120%	110%	70%	130%
Vanadium	2562504	2562504	21.3	23.4	9.4%	< 0.4	105%	70%	130%	96%	80%	120%	103%	70%	130%
Zinc	2562504	2562504	312	374	18.1%	< 5	104%	70%	130%	110%	80%	120%	113%	70%	130%
Chromium, Hexavalent	2562584	2562584	<0.2	<0.2	NA	< 0.2	101%	70%	130%	102%	80%	120%	91%	70%	130%
Cyanide, Free	2570581		<0.040	<0.040	NA	< 0.040	88%	70%	130%	101%	80%	120%	88%	70%	130%
Mercury	2562504	2562504	<0.10	<0.10	NA	< 0.10	104%	70%	130%	103%	80%	120%	82%	70%	130%
Electrical Conductivity (2:1)	2562504	2562504	1.63	1.59	2.5%	< 0.005	106%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	2562504	2562504	23.2	22.7	2.2%	NA									
pH, 2:1 CaCl2 Extraction	2562581	2562581	7.81	7.80	0.1%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.
For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.

pH Re-analysis

pH, 2:1 CaCl2 Extraction	2562507	2562507	11.37	11.39	0.2%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

Certified By:



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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T756718
PROJECT: BIGC-ENV-462B
ATTENTION TO: Eileen Liu
SAMPLING SITE:1074 Cooke Boulevard, Burlington
SAMPLED BY:AB

Trace Organics Analysis

RPT Date: Jun 16, 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 (with PAHs and VOC) (Soil)															
F1 (C6 - C10)	2575666		<5	<5	NA	< 5	103%	60%	140%	85%	60%	140%	93%	60%	140%
F2 (C10 to C16)	2571595		< 10	< 10	NA	< 10	101%	60%	140%	80%	60%	140%	91%	60%	140%
F3 (C16 to C34)	2571595		< 50	< 50	NA	< 50	90%	60%	140%	86%	60%	140%	108%	60%	140%
F4 (C34 to C50)	2571595		< 50	< 50	NA	< 50	89%	60%	140%	90%	60%	140%	120%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	2563605		<0.05	<0.05	NA	< 0.05	85%	50%	140%	67%	50%	140%	71%	50%	140%
Acenaphthylene	2563605		<0.05	<0.05	NA	< 0.05	112%	50%	140%	79%	50%	140%	82%	50%	140%
Acenaphthene	2563605		<0.05	<0.05	NA	< 0.05	103%	50%	140%	74%	50%	140%	78%	50%	140%
Fluorene	2563605		<0.05	<0.05	NA	< 0.05	111%	50%	140%	79%	50%	140%	82%	50%	140%
Phenanthrene	2563605		<0.05	<0.05	NA	< 0.05	105%	50%	140%	77%	50%	140%	74%	50%	140%
Anthracene	2563605		<0.05	<0.05	NA	< 0.05	117%	50%	140%	84%	50%	140%	82%	50%	140%
Fluoranthene	2563605		<0.05	<0.05	NA	< 0.05	93%	50%	140%	69%	50%	140%	62%	50%	140%
Pyrene	2563605		<0.05	<0.05	NA	< 0.05	88%	50%	140%	67%	50%	140%	59%	50%	140%
Benz(a)anthracene	2563605		<0.05	<0.05	NA	< 0.05	89%	50%	140%	102%	50%	140%	99%	50%	140%
Chrysene	2563605		<0.05	<0.05	NA	< 0.05	98%	50%	140%	85%	50%	140%	75%	50%	140%
Benzo(b)fluoranthene	2563605		<0.05	<0.05	NA	< 0.05	131%	50%	140%	89%	50%	140%	94%	50%	140%
Benzo(k)fluoranthene	2563605		<0.05	<0.05	NA	< 0.05	137%	50%	140%	92%	50%	140%	88%	50%	140%
Benzo(a)pyrene	2563605		<0.05	<0.05	NA	< 0.05	99%	50%	140%	104%	50%	140%	99%	50%	140%
Indeno(1,2,3-cd)pyrene	2563605		<0.05	<0.05	NA	< 0.05	106%	50%	140%	73%	50%	140%	71%	50%	140%
Dibenz(a,h)anthracene	2563605		<0.05	<0.05	NA	< 0.05	112%	50%	140%	76%	50%	140%	76%	50%	140%
Benzo(g,h,i)perylene	2563605		<0.05	<0.05	NA	< 0.05	100%	50%	140%	68%	50%	140%	64%	50%	140%
Total PCBs (soil)															
Polychlorinated Biphenyls	2557467		< 0.1	< 0.1	NA	< 0.1	107%	60%	140%	108%	60%	140%	109%	60%	140%
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	2537365		<0.05	<0.05	NA	< 0.05	95%	50%	140%	96%	50%	140%	84%	50%	140%
Vinyl Chloride	2537365		<0.02	<0.02	NA	< 0.02	84%	50%	140%	88%	50%	140%	101%	50%	140%
Bromomethane	2537365		<0.05	<0.05	NA	< 0.05	87%	50%	140%	89%	50%	140%	87%	50%	140%
Trichlorofluoromethane	2537365		<0.05	<0.05	NA	< 0.05	103%	50%	140%	81%	50%	140%	82%	50%	140%
Acetone	2537365		<0.50	<0.50	NA	< 0.50	112%	50%	140%	103%	50%	140%	99%	50%	140%
1,1-Dichloroethylene	2537365		<0.05	<0.05	NA	< 0.05	77%	50%	140%	81%	60%	130%	81%	50%	140%
Methylene Chloride	2537365		<0.05	<0.05	NA	< 0.05	111%	50%	140%	116%	60%	130%	91%	50%	140%
Trans- 1,2-Dichloroethylene	2537365		<0.05	<0.05	NA	< 0.05	96%	50%	140%	84%	60%	130%	81%	50%	140%
Methyl tert-butyl Ether	2537365		<0.05	<0.05	NA	< 0.05	96%	50%	140%	85%	60%	130%	81%	50%	140%
1,1-Dichloroethane	2537365		<0.02	<0.02	NA	< 0.02	99%	50%	140%	95%	60%	130%	90%	50%	140%
Methyl Ethyl Ketone	2537365		<0.50	<0.50	NA	< 0.50	115%	50%	140%	104%	50%	140%	115%	50%	140%
Cis- 1,2-Dichloroethylene	2537365		<0.02	<0.02	NA	< 0.02	86%	50%	140%	86%	60%	130%	102%	50%	140%
Chloroform	2537365		<0.04	<0.04	NA	< 0.04	89%	50%	140%	101%	60%	130%	106%	50%	140%
1,2-Dichloroethane	2537365		<0.03	<0.03	NA	< 0.03	111%	50%	140%	106%	60%	130%	96%	50%	140%

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T756718
PROJECT: BIGC-ENV-462B
ATTENTION TO: Eileen Liu
SAMPLING SITE:1074 Cooke Boulevard, Burlington
SAMPLED BY:AB

Trace Organics Analysis (Continued)

RPT Date: Jun 16, 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
1,1,1-Trichloroethane	2537365		<0.05	<0.05	NA	< 0.05	84%	50%	140%	87%	60%	130%	80%	50%	140%
Carbon Tetrachloride	2537365		<0.05	<0.05	NA	< 0.05	90%	50%	140%	93%	60%	130%	86%	50%	140%
Benzene	2537365		<0.02	<0.02	NA	< 0.02	93%	50%	140%	108%	60%	130%	103%	50%	140%
1,2-Dichloropropane	2537365		<0.03	<0.03	NA	< 0.03	99%	50%	140%	118%	60%	130%	113%	50%	140%
Trichloroethylene	2537365		<0.03	<0.03	NA	< 0.03	93%	50%	140%	104%	60%	130%	110%	50%	140%
Bromodichloromethane	2537365		<0.05	<0.05	NA	< 0.05	79%	50%	140%	91%	60%	130%	82%	50%	140%
Methyl Isobutyl Ketone	2537365		<0.50	<0.50	NA	< 0.50	95%	50%	140%	102%	50%	140%	98%	50%	140%
1,1,2-Trichloroethane	2537365		<0.04	<0.04	NA	< 0.04	110%	50%	140%	105%	60%	130%	99%	50%	140%
Toluene	2537365		<0.05	<0.05	NA	< 0.05	96%	50%	140%	109%	60%	130%	100%	50%	140%
Dibromochloromethane	2537365		<0.05	<0.05	NA	< 0.05	91%	50%	140%	80%	60%	130%	78%	50%	140%
Ethylene Dibromide	2537365		<0.04	<0.04	NA	< 0.04	103%	50%	140%	98%	60%	130%	93%	50%	140%
Tetrachloroethylene	2537365		<0.05	<0.05	NA	< 0.05	98%	50%	140%	99%	60%	130%	88%	50%	140%
1,1,1,2-Tetrachloroethane	2537365		<0.04	<0.04	NA	< 0.04	115%	50%	140%	104%	60%	130%	79%	50%	140%
Chlorobenzene	2537365		<0.05	<0.05	NA	< 0.05	99%	50%	140%	94%	60%	130%	105%	50%	140%
Ethylbenzene	2537365		<0.05	<0.05	NA	< 0.05	95%	50%	140%	112%	60%	130%	95%	50%	140%
m & p-Xylene	2537365		<0.05	<0.05	NA	< 0.05	113%	50%	140%	102%	60%	130%	105%	50%	140%
Bromoform	2537365		<0.05	<0.05	NA	< 0.05	75%	50%	140%	80%	60%	130%	75%	50%	140%
Styrene	2537365		<0.05	<0.05	NA	< 0.05	96%	50%	140%	117%	60%	130%	96%	50%	140%
1,1,2,2-Tetrachloroethane	2537365		<0.05	<0.05	NA	< 0.05	111%	50%	140%	109%	60%	130%	102%	50%	140%
o-Xylene	2537365		<0.05	<0.05	NA	< 0.05	110%	50%	140%	92%	60%	130%	83%	50%	140%
1,3-Dichlorobenzene	2537365		<0.05	<0.05	NA	< 0.05	107%	50%	140%	108%	60%	130%	113%	50%	140%
1,4-Dichlorobenzene	2537365		<0.05	<0.05	NA	< 0.05	116%	50%	140%	109%	60%	130%	105%	50%	140%
1,2-Dichlorobenzene	2537365		<0.05	<0.05	NA	< 0.05	118%	50%	140%	105%	60%	130%	105%	50%	140%
n-Hexane	2537365		<0.05	<0.05	NA	< 0.05	88%	50%	140%	103%	60%	130%	101%	50%	140%

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

Certified By: N Popowkolof

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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QA Violation

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

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

RPT Date: Jun 16, 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)											
Antimony	2562504	BH1-SS2	137%	70%	130%	99%	80%	120%	87%	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.
For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.

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Method Summary

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

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

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 7471B and SM 3112 B	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: 21T756718

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

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
Naphthalene-d8	ORG-91-5106	modified from EPA 3541 and EPA 8270E	GC/MS
Acenaphthene-d10	ORG-91-5106	modified from EPA 3541 and EPA 8270E	GC/MS
Chrysene-d12	ORG-91-5106	modified from EPA 3541 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5009	CCME Tier 1 Method	BALANCE
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS

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Method Summary

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

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

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

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Method Summary

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

AGAT WORK ORDER: 21T756718

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Boulevard, Burlington

SAMPLED BY:AB

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3541 & 8082	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082	GC/ECD

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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 #: 21T756718
Cooler Quantity: 1 BLK
Arrival Temperatures: 3.8 | 14.1 | 13.3
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Bagged Ice

Report Information:
Company: B.I.G. Consulting Inc.
Contact: Eileen Liu
Address: 505 Consumers Rd Suite 804
Toronto, ON M2J 4V8, Canada
Phone: 647-200-6433 Fax:
Reports to be sent to:
1. Email: eliu@brownfieldgi.com
2. Email:

Regulatory Requirements:
(Please check all applicable boxes)

☑ Regulation 153/04 — Table 3 (Indicate One) — ☐ Ind/Com ☑ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☑ Fine
☐ Excess Soils R406 — Table (Indicate One)
☐ Regulation 558
☐ CCME
☐ Sewer Use ☐ Sanitary ☐ Storm — Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other (Indicate One)

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

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

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

Project Information:
Project: B1GC-ENV-462A
Site Location: 1074 Cooke Boulevard, Burlington
Sampled By: AB
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: 505 Consumers Road, Suite 804 Toronto, ON M2J 4V8
Email: ldougherty@brownfieldgi.com

Sample Matrix Legend
D	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 & norganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSE	BTEX, F1-F4 PHCs Analyze F4G if required ☐ Yes ☐ No	PAHs	PCBs	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 106: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH1-SS1	May 26	12:25 PM	1	S					☑		✓	☑					N
BH1-SS2	May 26	12:30 PM	4	S			✓		✓	✓		✓					N
BH1-SS6	May 26	13:05 PM	3	S			✓					✓					N
BH2-SS2	May 26	14:35 PM	4	S			✓		✓	✓		✓					N
BH2-SS6	May 26	15:05 PM	2	S			✓			✓							N
BH3-SS2	May 31	9:15 PM	4	S	Limited Recovery		✓		✓	✓		✓					N
BH4-SS2	May 31	14:30 PM	4	S			✓		✓	✓		✓					N
BH4-SS6	May 31	15:05 PM	2	S			✓			✓							N
BH4-SS8	May 31	16:15 PM	3	S			✓					✓					N
BH6-SS2	June 2	15:20 PM	4	S			✓		✓	✓		✓					N
BH6-SS8	June 2	16:35 PM	3	S			✓					✓					N

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Sai S	June 4/2021	14:45	Hadi Daneshi		

'21 JUN 4 2:56PM

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CLIENT NAME: B.I.G. CONSULTING INC.
12-5500 TOMKEN ROAD
MISSISSAUGA, ON L4W 2Z4
416-214-4880
ATTENTION TO: Eileen Liu
PROJECT: BIGC-ENV-462B
AGAT WORK ORDER: 21T757586
SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer
TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer
DATE REPORTED: Jun 15, 2021
PAGES (INCLUDING COVER): 18
VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T757586

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

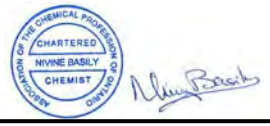
O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-06-07

DATE REPORTED: 2021-06-15

SAMPLE DESCRIPTION:				BH8-SS3	BH8-SS7	DUP04070
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-06-02 11:00	2021-06-03 11:35	2021-05-31 16:10
Parameter	Unit	G / S	RDL	2570930	2570931	2570933
Antimony	µg/g		0.8	<0.8	<0.8	<0.8
Arsenic	µg/g		1	6	9	7
Barium	µg/g		2.0	66.1	132	174
Beryllium	µg/g		0.4	0.5	0.5	0.5
Boron	µg/g		5	9	10	9
Boron (Hot Water Soluble)	µg/g		0.10	0.20	<0.10	0.14
Cadmium	µg/g		0.5	<0.5	<0.5	<0.5
Chromium	µg/g		5	16	14	14
Cobalt	µg/g		0.5	7.4	8.6	8.3
Copper	µg/g		1.0	46.2	68.8	73.2
Lead	µg/g		1	16	11	10
Molybdenum	µg/g		0.5	<0.5	0.7	0.8
Nickel	µg/g		1	15	18	16
Selenium	µg/g		0.8	<0.8	<0.8	<0.8
Silver	µg/g		0.5	<0.5	<0.5	<0.5
Thallium	µg/g		0.5	<0.5	<0.5	<0.5
Uranium	µg/g		0.50	0.51	0.66	0.58
Vanadium	µg/g		0.4	30.3	24.9	26.5
Zinc	µg/g		5	70	50	55
Chromium, Hexavalent	µg/g		0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g		0.040	<0.040	<0.040	<0.040
Mercury	µg/g		0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm		0.005	0.300	0.126	0.155
Sodium Adsorption Ratio (2:1) (Calc.)	N/A		N/A	4.21	0.517	1.03
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.84	8.02	8.08

Certified By:



Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21T757586

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-07

DATE REPORTED: 2021-06-15

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

2570930-2570933 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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AGAT WORK ORDER: 21T757586

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-07

DATE REPORTED: 2021-06-15

				SAMPLE DESCRIPTION:	BH8-SS3	DUP01020
				SAMPLE TYPE:	Soil	Soil
				DATE SAMPLED:	2021-06-02 11:00	2021-05-26 12:30
Parameter	Unit	G / S	RDL		2570930	2570935
Naphthalene	µg/g		0.05		<0.05	<0.05
Acenaphthylene	µg/g		0.05		<0.05	<0.05
Acenaphthene	µg/g		0.05		<0.05	<0.05
Fluorene	µg/g		0.05		<0.05	<0.05
Phenanthrene	µg/g		0.05		0.08	0.11
Anthracene	µg/g		0.05		0.08	<0.05
Fluoranthene	µg/g		0.05		0.12	0.20
Pyrene	µg/g		0.05		0.08	0.16
Benz(a)anthracene	µg/g		0.05		<0.05	<0.05
Chrysene	µg/g		0.05		<0.05	0.06
Benzo(b)fluoranthene	µg/g		0.05		0.11	0.20
Benzo(k)fluoranthene	µg/g		0.05		0.08	<0.05
Benzo(a)pyrene	µg/g		0.05		<0.05	0.12
Indeno(1,2,3-cd)pyrene	µg/g		0.05		<0.05	0.07
Dibenz(a,h)anthracene	µg/g		0.05		<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05		<0.05	0.06
1 and 2 Methlynaphthalene	µg/g		0.05		<0.05	<0.05
Moisture Content	%		0.1		9.9	6.4
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140			90	75
Acenaphthene-d10	%	50-140			89	77
Chrysene-d12	%	50-140			67	89

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

2570930-2570935 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: 21T757586

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-07

DATE REPORTED: 2021-06-15

				SAMPLE DESCRIPTION:	DUP06020
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-06-03 15:20
Parameter	Unit	G / S	RDL		2570936
Benzene	µg/g		0.02		<0.02
Toluene	µg/g		0.05		<0.05
Ethylbenzene	µg/g		0.05		<0.05
m & p-Xylene	µg/g		0.05		<0.05
o-Xylene	µg/g		0.05		<0.05
Xylenes (Total)	µg/g		0.05		<0.05
F1 (C6 - C10)	µg/g		5		<5
F1 (C6 to C10) minus BTEX	µg/g		5		<5
F2 (C10 to C16)	µg/g		10		<10
F3 (C16 to C34)	µg/g		50		<50
F4 (C34 to C50)	µg/g		50		<50
Gravimetric Heavy Hydrocarbons	µg/g		50		NA
Moisture Content	%		0.1		9.6
Surrogate	Unit	Acceptable Limits			
Terphenyl	%	60-140			104

Certified By: Pinkal Patel

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AGAT WORK ORDER: 21T757586

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-07

DATE REPORTED: 2021-06-15

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

2570936 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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AGAT WORK ORDER: 21T757586

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-07

DATE REPORTED: 2021-06-15

		SAMPLE DESCRIPTION:		BH8-SS3
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2021-06-02 11:00
Parameter	Unit	G / S	RDL	2570930
F1 (C6 - C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5
F2 (C10 to C16)	µg/g		10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10
F3 (C16 to C34)	µg/g		50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50
F4 (C34 to C50)	µg/g		50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA
Moisture Content	%		0.1	9.9
Surrogate	Unit	Acceptable Limits		
Terphenyl	%	60-140		92

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

2570930 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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AGAT WORK ORDER: 21T757586

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-07

DATE REPORTED: 2021-06-15

SAMPLE DESCRIPTION:				BH8-SS3	BH8-SS7	DUP06080
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-06-02 11:00	2021-06-03 11:35	2021-05-31 16:35
Parameter	Unit	G / S	RDL	2570930	2570931	2570932
Dichlorodifluoromethane	µg/g		0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g		0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05	<0.05	<0.05
Acetone	ug/g		0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02	<0.02	<0.02
Chloroform	ug/g		0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05	<0.05	<0.05
Benzene	ug/g		0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04	<0.04	<0.04
Toluene	ug/g		0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05	<0.05	<0.05

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21T757586

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-07

DATE REPORTED: 2021-06-15

				SAMPLE DESCRIPTION:	BH8-SS3	BH8-SS7	DUP06080
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-06-02 11:00	2021-06-03 11:35	2021-05-31 16:35
Parameter	Unit	G / S	RDL		2570930	2570931	2570932
m & p-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
Bromoform	ug/g		0.05		<0.05	<0.05	<0.05
Styrene	ug/g		0.05		<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05		<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05		<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05		<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05		<0.05	<0.05	<0.05
Xylenes (Total)	ug/g		0.05		<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.04		<0.04	<0.04	<0.04
n-Hexane	µg/g		0.05		<0.05	<0.05	<0.05
Moisture Content	%		0.1		9.9	3.7	14.4
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			100	100	100
4-Bromofluorobenzene	% Recovery	50-140			91	88	90

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

2570930-2570932 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: Pinkal Patel

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21T757586

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

Total PCBs (soil)

DATE RECEIVED: 2021-06-07

DATE REPORTED: 2021-06-15

				SAMPLE DESCRIPTION:	DUP01010
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-05-26 12:25
Parameter	Unit	G / S	RDL	2570934	
Polychlorinated Biphenyls	µg/g		0.1	<0.1	
Moisture Content	%		0.1	6.2	
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	60-130		72	

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

2570934 Results are based on the dry weight of soil extracted.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T757586
PROJECT: BIGC-ENV-462B
ATTENTION TO: Eileen Liu
SAMPLING SITE:1074 Cooke Blvd, Burlington
SAMPLED BY:AB

Soil Analysis

RPT Date: Jun 15, 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	2568442		<0.8	<0.8	NA	< 0.8	124%	70%	130%	106%	80%	120%	96%	70%	130%
Arsenic	2568442		3	3	NA	< 1	116%	70%	130%	108%	80%	120%	112%	70%	130%
Barium	2568442		30.5	32.0	4.8%	< 2.0	102%	70%	130%	100%	80%	120%	105%	70%	130%
Beryllium	2568442		<0.4	<0.4	NA	< 0.4	119%	70%	130%	100%	80%	120%	109%	70%	130%
Boron	2568442		8	8	NA	< 5	93%	70%	130%	115%	80%	120%	110%	70%	130%
Boron (Hot Water Soluble)	2572363		0.11	0.12	NA	< 0.10	96%	60%	140%	100%	70%	130%	101%	60%	140%
Cadmium	2568442		<0.5	<0.5	NA	< 0.5	102%	70%	130%	105%	80%	120%	106%	70%	130%
Chromium	2568442		11	11	NA	< 5	104%	70%	130%	106%	80%	120%	117%	70%	130%
Cobalt	2568442		4.3	4.3	0.0%	< 0.5	104%	70%	130%	108%	80%	120%	112%	70%	130%
Copper	2568442		10.5	10.3	1.9%	< 1.0	92%	70%	130%	109%	80%	120%	100%	70%	130%
Lead	2568442		36	37	2.7%	< 1	105%	70%	130%	97%	80%	120%	96%	70%	130%
Molybdenum	2568442		<0.5	<0.5	NA	< 0.5	108%	70%	130%	108%	80%	120%	118%	70%	130%
Nickel	2568442		7	7	0.0%	< 1	98%	70%	130%	105%	80%	120%	102%	70%	130%
Selenium	2568442		<0.8	<0.8	NA	< 0.8	107%	70%	130%	105%	80%	120%	109%	70%	130%
Silver	2568442		<0.5	<0.5	NA	< 0.5	129%	70%	130%	98%	80%	120%	96%	70%	130%
Thallium	2568442		<0.5	<0.5	NA	< 0.5	112%	70%	130%	108%	80%	120%	107%	70%	130%
Uranium	2568442		<0.50	<0.50	NA	< 0.50	113%	70%	130%	108%	80%	120%	116%	70%	130%
Vanadium	2568442		21.6	21.5	0.5%	< 0.4	116%	70%	130%	109%	80%	120%	125%	70%	130%
Zinc	2568442		185	182	1.6%	< 5	100%	70%	130%	112%	80%	120%	101%	70%	130%
Chromium, Hexavalent	2591888		<0.2	<0.2	NA	< 0.2	100%	70%	130%	89%	80%	120%	78%	70%	130%
Cyanide, Free	2581219		<0.040	<0.040	NA	< 0.040	91%	70%	130%	95%	80%	120%	107%	70%	130%
Mercury	2568442		<0.10	<0.10	NA	< 0.10	94%	70%	130%	105%	80%	120%	94%	70%	130%
Electrical Conductivity (2:1)	2570930	2570930	0.300	0.306	2.0%	< 0.005	105%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	2570930	2570930	4.21	4.17	1.0%	NA									
pH, 2:1 CaCl2 Extraction	2574258		7.36	7.32	0.5%	NA	101%	80%	120%						

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

Certified By:



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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T757586
PROJECT: BIGC-ENV-462B
ATTENTION TO: Eileen Liu
SAMPLING SITE:1074 Cooke Blvd, Burlington
SAMPLED BY:AB

Trace Organics Analysis

RPT Date: Jun 15, 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 (with PAHs and VOC) (Soil)															
F1 (C6 - C10)	2581459		<5	<5	NA	< 5	87%	60%	140%	99%	60%	140%	99%	60%	140%
F2 (C10 to C16)	2570936	2570936	< 10	< 10	NA	< 10	111%	60%	140%	107%	60%	140%	80%	60%	140%
F3 (C16 to C34)	2570936	2570936	< 50	< 50	NA	< 50	106%	60%	140%	123%	60%	140%	96%	60%	140%
F4 (C34 to C50)	2570936	2570936	< 50	< 50	NA	< 50	102%	60%	140%	106%	60%	140%	84%	60%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	2581459		<0.02	<0.02	NA	< 0.02	100%	60%	140%	80%	60%	140%	94%	60%	140%
Toluene	2581459		<0.05	<0.05	NA	< 0.05	120%	60%	140%	97%	60%	140%	102%	60%	140%
Ethylbenzene	2581459		<0.05	<0.05	NA	< 0.05	105%	60%	140%	104%	60%	140%	89%	60%	140%
m & p-Xylene	2581459		<0.05	<0.05	NA	< 0.05	107%	60%	140%	97%	60%	140%	105%	60%	140%
o-Xylene	2581459		<0.05	<0.05	NA	< 0.05	71%	60%	140%	81%	60%	140%	112%	60%	140%
F1 (C6 - C10)	2581459		<5	<5	NA	< 5	87%	60%	140%	99%	60%	140%	99%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	2570930		NA	NA	NA	< 0.05	88%	50%	140%	69%	50%	140%	99%	50%	140%
Acenaphthylene	2570930		NA	NA	NA	< 0.05	117%	50%	140%	88%	50%	140%	84%	50%	140%
Acenaphthene	2570930		NA	NA	NA	< 0.05	106%	50%	140%	81%	50%	140%	75%	50%	140%
Fluorene	2570930		NA	NA	NA	< 0.05	114%	50%	140%	86%	50%	140%	72%	50%	140%
Phenanthrene	2570930		NA	NA	NA	< 0.05	106%	50%	140%	82%	50%	140%	95%	50%	140%
Anthracene	2570930		NA	NA	NA	< 0.05	119%	50%	140%	88%	50%	140%	74%	50%	140%
Fluoranthene	2570930		NA	NA	NA	< 0.05	93%	50%	140%	70%	50%	140%	82%	50%	140%
Pyrene	2570930		NA	NA	NA	< 0.05	87%	50%	140%	65%	50%	140%	72%	50%	140%
Benz(a)anthracene	2570930		NA	NA	NA	< 0.05	51%	50%	140%	72%	50%	140%	74%	50%	140%
Chrysene	2570930		NA	NA	NA	< 0.05	58%	50%	140%	84%	50%	140%	95%	50%	140%
Benzo(b)fluoranthene	2570930		NA	NA	NA	< 0.05	140%	50%	140%	93%	50%	140%	84%	50%	140%
Benzo(k)fluoranthene	2570930		NA	NA	NA	< 0.05	132%	50%	140%	111%	50%	140%	75%	50%	140%
Benzo(a)pyrene	2570930		NA	NA	NA	< 0.05	111%	50%	140%	113%	50%	140%	75%	50%	140%
Indeno(1,2,3-cd)pyrene	2570930		NA	NA	NA	< 0.05	112%	50%	140%	82%	50%	140%	95%	50%	140%
Dibenz(a,h)anthracene	2570930		NA	NA	NA	< 0.05	116%	50%	140%	85%	50%	140%	84%	50%	140%
Benzo(g,h,i)perylene	2570930		NA	NA	NA	< 0.05	104%	50%	140%	77%	50%	140%	76%	50%	140%
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	2578287		<0.05	<0.05	NA	< 0.05	83%	50%	140%	82%	50%	140%	76%	50%	140%
Vinyl Chloride	2578287		<0.02	<0.02	NA	< 0.02	82%	50%	140%	90%	50%	140%	86%	50%	140%
Bromomethane	2578287		<0.05	<0.05	NA	< 0.05	96%	50%	140%	101%	50%	140%	105%	50%	140%
Trichlorofluoromethane	2578287		<0.05	<0.05	NA	< 0.05	106%	50%	140%	109%	50%	140%	106%	50%	140%
Acetone	2578287		<0.50	<0.50	NA	< 0.50	94%	50%	140%	111%	50%	140%	101%	50%	140%
1,1-Dichloroethylene	2578287		<0.05	<0.05	NA	< 0.05	90%	50%	140%	94%	60%	130%	96%	50%	140%
Methylene Chloride	2578287		<0.05	<0.05	NA	< 0.05	107%	50%	140%	90%	60%	130%	86%	50%	140%
Trans- 1,2-Dichloroethylene	2578287		<0.05	<0.05	NA	< 0.05	100%	50%	140%	88%	60%	130%	97%	50%	140%
Methyl tert-butyl Ether	2578287		<0.05	<0.05	NA	< 0.05	81%	50%	140%	77%	60%	130%	100%	50%	140%

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T757586
PROJECT: BIGC-ENV-462B
ATTENTION TO: Eileen Liu
SAMPLING SITE:1074 Cooke Blvd, Burlington
SAMPLED BY:AB

Trace Organics Analysis (Continued)

RPT Date: Jun 15, 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
1,1-Dichloroethane	2578287		<0.02	<0.02	NA	< 0.02	97%	50%	140%	99%	60%	130%	85%	50%	140%
Methyl Ethyl Ketone	2578287		<0.50	<0.50	NA	< 0.50	116%	50%	140%	81%	50%	140%	94%	50%	140%
Cis- 1,2-Dichloroethylene	2578287		<0.02	<0.02	NA	< 0.02	104%	50%	140%	88%	60%	130%	104%	50%	140%
Chloroform	2578287		<0.04	<0.04	NA	< 0.04	98%	50%	140%	103%	60%	130%	91%	50%	140%
1,2-Dichloroethane	2578287		<0.03	<0.03	NA	< 0.03	101%	50%	140%	101%	60%	130%	85%	50%	140%
1,1,1-Trichloroethane	2578287		<0.05	<0.05	NA	< 0.05	84%	50%	140%	80%	60%	130%	85%	50%	140%
Carbon Tetrachloride	2578287		<0.05	<0.05	NA	< 0.05	110%	50%	140%	102%	60%	130%	95%	50%	140%
Benzene	2578287		<0.02	<0.02	NA	< 0.02	108%	50%	140%	87%	60%	130%	87%	50%	140%
1,2-Dichloropropane	2578287		<0.03	<0.03	NA	< 0.03	108%	50%	140%	101%	60%	130%	99%	50%	140%
Trichloroethylene	2578287		<0.03	<0.03	NA	< 0.03	91%	50%	140%	108%	60%	130%	86%	50%	140%
Bromodichloromethane	2578287		<0.05	<0.05	NA	< 0.05	97%	50%	140%	95%	60%	130%	99%	50%	140%
Methyl Isobutyl Ketone	2578287		<0.50	<0.50	NA	< 0.50	102%	50%	140%	94%	50%	140%	96%	50%	140%
1,1,2-Trichloroethane	2578287		<0.04	<0.04	NA	< 0.04	109%	50%	140%	96%	60%	130%	112%	50%	140%
Toluene	2578287		<0.05	<0.05	NA	< 0.05	100%	50%	140%	101%	60%	130%	94%	50%	140%
Dibromochloromethane	2578287		<0.05	<0.05	NA	< 0.05	104%	50%	140%	100%	60%	130%	85%	50%	140%
Ethylene Dibromide	2578287		<0.04	<0.04	NA	< 0.04	96%	50%	140%	110%	60%	130%	101%	50%	140%
Tetrachloroethylene	2578287		<0.05	<0.05	NA	< 0.05	107%	50%	140%	96%	60%	130%	87%	50%	140%
1,1,1,2-Tetrachloroethane	2578287		<0.04	<0.04	NA	< 0.04	91%	50%	140%	87%	60%	130%	78%	50%	140%
Chlorobenzene	2578287		<0.05	<0.05	NA	< 0.05	111%	50%	140%	87%	60%	130%	107%	50%	140%
Ethylbenzene	2578287		<0.05	<0.05	NA	< 0.05	90%	50%	140%	101%	60%	130%	90%	50%	140%
m & p-Xylene	2578287		<0.05	<0.05	NA	< 0.05	100%	50%	140%	111%	60%	130%	98%	50%	140%
Bromoform	2578287		<0.05	<0.05	NA	< 0.05	98%	50%	140%	98%	60%	130%	76%	50%	140%
Styrene	2578287		<0.05	<0.05	NA	< 0.05	88%	50%	140%	90%	60%	130%	93%	50%	140%
1,1,2,2-Tetrachloroethane	2578287		<0.05	<0.05	NA	< 0.05	99%	50%	140%	105%	60%	130%	103%	50%	140%
o-Xylene	2578287		<0.05	<0.05	NA	< 0.05	107%	50%	140%	90%	60%	130%	101%	50%	140%
1,3-Dichlorobenzene	2578287		<0.05	<0.05	NA	< 0.05	100%	50%	140%	96%	60%	130%	105%	50%	140%
1,4-Dichlorobenzene	2578287		<0.05	<0.05	NA	< 0.05	109%	50%	140%	93%	60%	130%	100%	50%	140%
1,2-Dichlorobenzene	2578287		<0.05	<0.05	NA	< 0.05	115%	50%	140%	117%	60%	130%	97%	50%	140%
n-Hexane	2578287		<0.05	<0.05	NA	< 0.05	90%	50%	140%	110%	60%	130%	82%	50%	140%
Total PCBs (soil)															
Polychlorinated Biphenyls	2578315		< 0.1	< 0.1	NA	< 0.1	98%	60%	140%	87%	60%	140%	88%	60%	140%

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

Certified By: Jinkal Patel

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Method Summary

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

AGAT WORK ORDER: 21T757586

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

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 7471B and SM 3112 B	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: 21T757586

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

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
Naphthalene-d8	ORG-91-5106	modified from EPA 3541 and EPA 8270E	GC/MS
Acenaphthene-d10	ORG-91-5106	modified from EPA 3541 and EPA 8270E	GC/MS
Chrysene-d12	ORG-91-5106	modified from EPA 3541 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5009	CCME Tier 1 Method	BALANCE
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - 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

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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http://www.agatlabs.com

Method Summary

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

AGAT WORK ORDER: 21T757586

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

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

AGAT WORK ORDER: 21T757586

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke Blvd, Burlington

SAMPLED BY:AB

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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
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
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3541 & 8082	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082	GC/ECD

Results relate only to the items tested. Results apply to samples as received.

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Mississauga, Ontario L4Z 1Y2
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AGAT Laboratories

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 #: 21T757586
Cooler Quantity: 1 LRG BLK
Arrival Temperatures: 4.3 | 5.1 | 4.7
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Bagged Ice

Report Information:
Company: B.I.G. Consulting Inc.
Contact: Eileen Liu
Address: 505 Consumers Road, Suite 804
Toronto, ON M2J 4V8, Canada
Phone: 416-214-4880 Fax:
Reports to be sent to:
1. Email: eliu@brownfieldigi.com
2. Email:

Regulatory Requirements:
(Please check all applicable boxes)
☑ Regulation 153/04 — Table (Indicate One): ☐ Ind/Com ☑ Res/Park ☐ Agriculture; Soil Texture (Check One): ☐ Coarse ☑ Fine
☐ Excess Soils R406 — Table (Indicate One); ☐ Regulation 558; ☐ CCME
☐ Sewer Use ☐ Sanitary ☐ Storm — Region; ☐ Prov. Water Quality Objectives (PWQO); ☐ Other — Indicate One

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

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

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

Project Information:
Project: BIGC-ENV-462A
Site Location: 1074 Cooke Blvd, Burlington
Sampled By: AB
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 L4W 2Z4
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, DOC (Y/N)	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs — Analyze F4G if required ☐ Yes ☐ No	PAHs	PCBs	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH8-SS3	June 2	11:00 AM/PM	4	S		N	✓		✓	✓		✓					N
BH8-SS7	June 3	11:35 AM/PM	3	S	Limited Recovery	N	✓					✓					N
DUP06080	June 2	16:35 AM/PM	2	S		N						✓					N
DUP04070	May 31	4:10 AM/PM	1	S		N	✓										N
DUP01010	May 26	12:25 AM/PM	1	S		N					✓						N
DUP01020	May 26	12:30 AM/PM	1	S		N				✓							N
DUP06020	June 3	15:20 AM/PM	2	S	Limited Recovery	N			✓								N
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Sariz	7/Jun/2024	17:30	Hadi Dawayka		
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 JUN 7 5PM

Page ____ of ____

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

AGAT Laboratories

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CLIENT NAME: B.I.G. CONSULTING
804-505 CONSUMERS ROAD
TORONTO, ON M2J 4V8

ATTENTION TO: Eileen Liu

PROJECT: BIGC-ENV-462B

AGAT WORK ORDER: 21T759349

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Jun 17, 2021

PAGES (INCLUDING COVER): 17

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 21T759349

PROJECT: BIGC-ENV-462B

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-06-10

DATE REPORTED: 2021-06-17

				SAMPLE DESCRIPTION:	BH5-SS3	BH7-SS2	BH7-SS5
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-06-02 09:50	2021-06-02 09:30	2021-06-02 09:55
Parameter	Unit	G / S	RDL		2585860	2585867	2585868
Antimony	µg/g	7.5	0.8		<0.8	<0.8	<0.8
Arsenic	µg/g	18	1		6	5	4
Barium	µg/g	390	2.0		157	184	163
Beryllium	µg/g	5	0.4		0.8	0.6	0.8
Boron	µg/g	120	5		27	18	27
Boron (Hot Water Soluble)	µg/g	1.5	0.10		0.95	0.59	0.20
Cadmium	µg/g	1.2	0.5		<0.5	<0.5	<0.5
Chromium	µg/g	160	5		21	19	27
Cobalt	µg/g	22	0.5		10.7	8.7	14.4
Copper	µg/g	180	1.0		15.0	25.0	14.9
Lead	µg/g	120	1		14	27	8
Molybdenum	µg/g	6.9	0.5		0.8	1.1	0.5
Nickel	µg/g	130	1		22	18	30
Selenium	µg/g	2.4	0.8		<0.8	<0.8	<0.8
Silver	µg/g	25	0.5		<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5		<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50		0.94	0.62	0.68
Vanadium	µg/g	86	0.4		34.0	28.0	34.4
Zinc	µg/g	340	5		66	172	70
Chromium, Hexavalent	µg/g	10	0.2		<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040		<0.040	<0.040	<0.040
Mercury	µg/g	1.8	0.10		<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005		0.913	1.93	0.824
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A		10.9	39.1	10.4
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA		8.35	8.11	7.91

Certified By:



Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21T759349

PROJECT: BIGC-ENV-462B

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-06-10

DATE REPORTED: 2021-06-17

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

2585860-2585868 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 perfomed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T759349

PROJECT: BIGC-ENV-462B

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-06-10

DATE REPORTED: 2021-06-17

				SAMPLE DESCRIPTION:	BH5-SS3	BH7-SS2
				SAMPLE TYPE:	Soil	Soil
				DATE SAMPLED:	2021-06-02 09:50	2021-06-02 09:30
Parameter	Unit	G / S	RDL		2585860	2585867
Naphthalene	µg/g	0.75	0.05		<0.05	<0.05
Acenaphthylene	µg/g	0.17	0.05		<0.05	<0.05
Acenaphthene	µg/g	58	0.05		<0.05	<0.05
Fluorene	µg/g	69	0.05		<0.05	<0.05
Phenanthrene	µg/g	7.8	0.05		<0.05	0.18
Anthracene	µg/g	0.74	0.05		<0.05	0.08
Fluoranthene	µg/g	0.69	0.05		0.06	0.37
Pyrene	µg/g	78	0.05		<0.05	0.30
Benz(a)anthracene	µg/g	0.63	0.05		<0.05	0.11
Chrysene	µg/g	7.8	0.05		<0.05	0.13
Benzo(b)fluoranthene	µg/g	0.78	0.05		0.09	0.70
Benzo(k)fluoranthene	µg/g	0.78	0.05		<0.05	0.09
Benzo(a)pyrene	µg/g	0.3	0.05		<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.48	0.05		<0.05	0.14
Dibenz(a,h)anthracene	µg/g	0.1	0.05		<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	7.8	0.05		<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	3.4	0.05		<0.05	<0.05
Moisture Content	%		0.1		8.0	8.6
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140			63	72
Acenaphthene-d10	%	50-140			64	74
Chrysene-d12	%	50-140			84	84

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

2585860-2585867 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 perfomed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T759349

PROJECT: BIGC-ENV-462B

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-06-10

DATE REPORTED: 2021-06-17

				SAMPLE DESCRIPTION:	BH5-SS3	BH7-SS2
				SAMPLE TYPE:	Soil	Soil
				DATE SAMPLED:	2021-06-02 09:50	2021-06-02 09:30
Parameter	Unit	G / S	RDL		2585860	2585867
F1 (C6 - C10)	µg/g	65	5		<5	<5
F1 (C6 to C10) minus BTEX	µg/g	65	5		<5	<5
F2 (C10 to C16)	µg/g	150	10		<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10		<10	<10
F3 (C16 to C34)	µg/g	1300	50		<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50		<50	<50
F4 (C34 to C50)	µg/g	5600	50		<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	5600	50		NA	NA
Moisture Content	%		0.1		8.0	8.6
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140			78	93
Terphenyl	%	60-140			82	100

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

2585860-2585867 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis perfomed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21T759349

PROJECT: BIGC-ENV-462B

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-06-10

DATE REPORTED: 2021-06-17

SAMPLE DESCRIPTION:				BH5-SS3	BH7-SS2	BH7-SS5
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-06-02 09:50	2021-06-02 09:30	2021-06-02 09:55
Parameter	Unit	G / S	RDL	2585860	2585867	2585868
Dichlorodifluoromethane	µg/g	25	0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.022	0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	5.8	0.05	<0.05	<0.05	<0.05
Acetone	ug/g	28	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	0.96	0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.75	0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	1.4	0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	11	0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	44	0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	30	0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.18	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	3.4	0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.12	0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.17	0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.085	0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.52	0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	4.3	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	6	0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	9.4	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	2.3	0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.7	0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	15	0.05	<0.05	<0.05	<0.05

Certified By: Jinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 21T759349

PROJECT: BIGC-ENV-462B

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-06-10

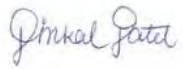
DATE REPORTED: 2021-06-17

				SAMPLE DESCRIPTION:	BH5-SS3	BH7-SS2	BH7-SS5
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-06-02 09:50	2021-06-02 09:30	2021-06-02 09:55
Parameter	Unit	G / S	RDL		2585860	2585867	2585868
m & p-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
Bromoform	ug/g	0.26	0.05		<0.05	<0.05	<0.05
Styrene	ug/g	2.2	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	6	0.05		<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.097	0.05		<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	4.3	0.05		<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	25	0.05		<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.083	0.04		<0.04	<0.04	<0.04
n-Hexane	µg/g	34	0.05		<0.05	<0.05	<0.05
Moisture Content	%		0.1		8.0	8.6	18.7
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			101	106	93
4-Bromofluorobenzene	% Recovery	50-140			96	106	94

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

2585860-2585868 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 perfomed at AGAT Toronto (unless marked by *)

Certified By: 

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Exceedance Summary

AGAT WORK ORDER: 21T759349

PROJECT: BIGC-ENV-462B

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
2585860	BH5-SS3	ON T3 S RPI MFT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	0.913
2585860	BH5-SS3	ON T3 S RPI MFT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	10.9
2585867	BH7-SS2	ON T3 S RPI MFT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	1.93
2585867	BH7-SS2	ON T3 S RPI MFT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	39.1
2585868	BH7-SS5	ON T3 S RPI MFT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	0.824
2585868	BH7-SS5	ON T3 S RPI MFT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	10.4

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING
AGAT WORK ORDER: 21T759349
PROJECT: BIGC-ENV-462B
ATTENTION TO: Eileen Liu
SAMPLING SITE:Cooke
SAMPLED BY:TVH

Soil Analysis

RPT Date: Jun 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 (Soil)															
Antimony	2585860	2585860	<0.8	<0.8	NA	< 0.8	127%	70%	130%	108%	80%	120%	79%	70%	130%
Arsenic	2585860	2585860	6	5	18.2%	< 1	118%	70%	130%	111%	80%	120%	108%	70%	130%
Barium	2585860	2585860	157	128	20.4%	< 2.0	108%	70%	130%	102%	80%	120%	93%	70%	130%
Beryllium	2585860	2585860	0.8	0.6	NA	< 0.4	120%	70%	130%	112%	80%	120%	95%	70%	130%
Boron	2585860	2585860	27	21	NA	< 5	100%	70%	130%	109%	80%	120%	86%	70%	130%
Boron (Hot Water Soluble)	2585860	2585860	0.95	0.93	2.1%	< 0.10	99%	60%	140%	99%	70%	130%	98%	60%	140%
Cadmium	2585860	2585860	<0.5	<0.5	NA	< 0.5	87%	70%	130%	109%	80%	120%	106%	70%	130%
Chromium	2585860	2585860	21	19	NA	< 5	108%	70%	130%	107%	80%	120%	95%	70%	130%
Cobalt	2585860	2585860	10.7	9.7	9.8%	< 0.5	107%	70%	130%	108%	80%	120%	96%	70%	130%
Copper	2585860	2585860	15.0	13.6	9.8%	< 1.0	96%	70%	130%	113%	80%	120%	94%	70%	130%
Lead	2585860	2585860	14	12	15.4%	< 1	106%	70%	130%	94%	80%	120%	87%	70%	130%
Molybdenum	2585860	2585860	0.8	0.6	NA	< 0.5	118%	70%	130%	114%	80%	120%	106%	70%	130%
Nickel	2585860	2585860	22	20	9.5%	< 1	102%	70%	130%	108%	80%	120%	93%	70%	130%
Selenium	2585860	2585860	<0.8	<0.8	NA	< 0.8	138%	70%	130%	109%	80%	120%	99%	70%	130%
Silver	2585860	2585860	<0.5	<0.5	NA	< 0.5	112%	70%	130%	110%	80%	120%	97%	70%	130%
Thallium	2585860	2585860	<0.5	<0.5	NA	< 0.5	104%	70%	130%	101%	80%	120%	97%	70%	130%
Uranium	2585860	2585860	0.94	0.85	NA	< 0.50	108%	70%	130%	101%	80%	120%	102%	70%	130%
Vanadium	2585860	2585860	34.0	29.3	14.8%	< 0.4	116%	70%	130%	109%	80%	120%	99%	70%	130%
Zinc	2585860	2585860	66	57	14.6%	< 5	107%	70%	130%	118%	80%	120%	96%	70%	130%
Chromium, Hexavalent	2581808		<0.2	<0.2	NA	< 0.2	105%	70%	130%	94%	80%	120%	85%	70%	130%
Cyanide, Free	2594148		<0.040	<0.040	NA	< 0.040	108%	70%	130%	108%	80%	120%	98%	70%	130%
Mercury	2585860	2585860	<0.10	<0.10	NA	< 0.10	112%	70%	130%	107%	80%	120%	101%	70%	130%
Electrical Conductivity (2:1)	2585860	2585860	0.913	0.886	3.0%	< 0.005	108%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	2585860	2585860	10.9	11.1	1.8%	NA									
pH, 2:1 CaCl2 Extraction	2598361		8.30	8.17	1.6%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
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
PROJECT: BIGC-ENV-462B
SAMPLING SITE:Cooke

AGAT WORK ORDER: 21T759349
ATTENTION TO: Eileen Liu
SAMPLED BY:TVH

Trace Organics Analysis

RPT Date: Jun 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 (with PAHs and VOC) (Soil)															
F1 (C6 - C10)	2590082		<5	<5	NA	< 5	85%	60%	140%	117%	60%	140%	100%	60%	140%
F2 (C10 to C16)	2581930		< 10	< 10	NA	< 10	106%	60%	140%	105%	60%	140%	109%	60%	140%
F3 (C16 to C34)	2581930		< 50	< 50	NA	< 50	103%	60%	140%	124%	60%	140%	126%	60%	140%
F4 (C34 to C50)	2581930		< 50	< 50	NA	< 50	96%	60%	140%	104%	60%	140%	106%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	2585867	2585867	<0.05	<0.05	NA	< 0.05	89%	50%	140%	80%	50%	140%	84%	50%	140%
Acenaphthylene	2585867	2585867	<0.05	<0.05	NA	< 0.05	118%	50%	140%	92%	50%	140%	98%	50%	140%
Acenaphthene	2585867	2585867	<0.05	<0.05	NA	< 0.05	106%	50%	140%	85%	50%	140%	105%	50%	140%
Fluorene	2585867	2585867	<0.05	<0.05	NA	< 0.05	115%	50%	140%	91%	50%	140%	59%	50%	140%
Phenanthrene	2585867	2585867	0.18	0.17	NA	< 0.05	105%	50%	140%	79%	50%	140%	84%	50%	140%
Anthracene	2585867	2585867	0.08	0.07	NA	< 0.05	110%	50%	140%	101%	50%	140%	86%	50%	140%
Fluoranthene	2585867	2585867	0.37	0.27	28.7%	< 0.05	94%	50%	140%	77%	50%	140%	94%	50%	140%
Pyrene	2585867	2585867	0.30	0.23	25.7%	< 0.05	86%	50%	140%	69%	50%	140%	84%	50%	140%
Benz(a)anthracene	2585867	2585867	0.11	0.07	NA	< 0.05	90%	50%	140%	60%	50%	140%	87%	50%	140%
Chrysene	2585867	2585867	0.13	0.09	NA	< 0.05	98%	50%	140%	75%	50%	140%	75%	50%	140%
Benzo(b)fluoranthene	2585867	2585867	0.70	0.54	25.1%	< 0.05	107%	50%	140%	110%	50%	140%	84%	50%	140%
Benzo(k)fluoranthene	2585867	2585867	0.09	0.08	NA	< 0.05	103%	50%	140%	89%	50%	140%	87%	50%	140%
Benzo(a)pyrene	2585867	2585867	0.32	<0.05	NA	< 0.05	84%	50%	140%	94%	50%	140%	101%	50%	140%
Indeno(1,2,3-cd)pyrene	2585867	2585867	0.14	0.12	NA	< 0.05	109%	50%	140%	71%	50%	140%	112%	50%	140%
Dibenz(a,h)anthracene	2585867	2585867	<0.05	<0.05	NA	< 0.05	121%	50%	140%	76%	50%	140%	98%	50%	140%
Benzo(g,h,i)perylene	2585867	2585867	<0.05	0.10	NA	< 0.05	130%	50%	140%	74%	50%	140%	70%	50%	140%
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	2585868	2585868	<0.05	<0.05	NA	< 0.05	83%	50%	140%	82%	50%	140%	102%	50%	140%
Vinyl Chloride	2585868	2585868	<0.02	<0.02	NA	< 0.02	82%	50%	140%	90%	50%	140%	95%	50%	140%
Bromomethane	2585868	2585868	<0.05	<0.05	NA	< 0.05	96%	50%	140%	101%	50%	140%	100%	50%	140%
Trichlorofluoromethane	2585868	2585868	<0.05	<0.05	NA	< 0.05	106%	50%	140%	109%	50%	140%	90%	50%	140%
Acetone	2585868	2585868	<0.50	<0.50	NA	< 0.50	94%	50%	140%	111%	50%	140%	94%	50%	140%
1,1-Dichloroethylene	2585868	2585868	<0.05	<0.05	NA	< 0.05	90%	50%	140%	94%	60%	130%	100%	50%	140%
Methylene Chloride	2585868	2585868	<0.05	<0.05	NA	< 0.05	107%	50%	140%	90%	60%	130%	118%	50%	140%
Trans- 1,2-Dichloroethylene	2585868	2585868	<0.05	<0.05	NA	< 0.05	100%	50%	140%	88%	60%	130%	90%	50%	140%
Methyl tert-butyl Ether	2585868	2585868	<0.05	<0.05	NA	< 0.05	81%	50%	140%	77%	60%	130%	87%	50%	140%
1,1-Dichloroethane	2585868	2585868	<0.02	<0.02	NA	< 0.02	97%	50%	140%	99%	60%	130%	85%	50%	140%
Methyl Ethyl Ketone	2585868	2585868	<0.50	<0.50	NA	< 0.50	116%	50%	140%	81%	50%	140%	102%	50%	140%
Cis- 1,2-Dichloroethylene	2585868	2585868	<0.02	<0.02	NA	< 0.02	104%	50%	140%	88%	60%	130%	86%	50%	140%
Chloroform	2585868	2585868	<0.04	<0.04	NA	< 0.04	98%	50%	140%	103%	60%	130%	86%	50%	140%
1,2-Dichloroethane	2585868	2585868	<0.03	<0.03	NA	< 0.03	101%	50%	140%	101%	60%	130%	98%	50%	140%
1,1,1-Trichloroethane	2585868	2585868	<0.05	<0.05	NA	< 0.05	84%	50%	140%	80%	60%	130%	93%	50%	140%
Carbon Tetrachloride	2585868	2585868	<0.05	<0.05	NA	< 0.05	110%	50%	140%	102%	60%	130%	79%	50%	140%

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING
PROJECT: BIGC-ENV-462B
SAMPLING SITE:Cooke

AGAT WORK ORDER: 21T759349
ATTENTION TO: Eileen Liu
SAMPLED BY:TVH

Trace Organics Analysis (Continued)

RPT Date: Jun 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
Benzene	2585868	2585868	<0.02	<0.02	NA	< 0.02	108%	50%	140%	87%	60%	130%	100%	50%	140%
1,2-Dichloropropane	2585868	2585868	<0.03	<0.03	NA	< 0.03	108%	50%	140%	101%	60%	130%	97%	50%	140%
Trichloroethylene	2585868	2585868	<0.03	<0.03	NA	< 0.03	91%	50%	140%	108%	60%	130%	104%	50%	140%
Bromodichloromethane	2585868	2585868	<0.05	<0.05	NA	< 0.05	97%	50%	140%	95%	60%	130%	83%	50%	140%
Methyl Isobutyl Ketone	2585868	2585868	<0.50	<0.50	NA	< 0.50	102%	50%	140%	94%	50%	140%	98%	50%	140%
1,1,2-Trichloroethane	2585868	2585868	<0.04	<0.04	NA	< 0.04	109%	50%	140%	96%	60%	130%	116%	50%	140%
Toluene	2585868	2585868	<0.05	<0.05	NA	< 0.05	100%	50%	140%	101%	60%	130%	98%	50%	140%
Dibromochloromethane	2585868	2585868	<0.05	<0.05	NA	< 0.05	104%	50%	140%	100%	60%	130%	105%	50%	140%
Ethylene Dibromide	2585868	2585868	<0.04	<0.04	NA	< 0.04	96%	50%	140%	110%	60%	130%	101%	50%	140%
Tetrachloroethylene	2585868	2585868	<0.05	<0.05	NA	< 0.05	107%	50%	140%	96%	60%	130%	90%	50%	140%
1,1,1,2-Tetrachloroethane	2585868	2585868	<0.04	<0.04	NA	< 0.04	91%	50%	140%	87%	60%	130%	80%	50%	140%
Chlorobenzene	2585868	2585868	<0.05	<0.05	NA	< 0.05	111%	50%	140%	87%	60%	130%	111%	50%	140%
Ethylbenzene	2585868	2585868	<0.05	<0.05	NA	< 0.05	90%	50%	140%	101%	60%	130%	94%	50%	140%
m & p-Xylene	2585868	2585868	<0.05	<0.05	NA	< 0.05	100%	50%	140%	111%	60%	130%	100%	50%	140%
Bromoform	2585868	2585868	<0.05	<0.05	NA	< 0.05	98%	50%	140%	98%	60%	130%	77%	50%	140%
Styrene	2585868	2585868	<0.05	<0.05	NA	< 0.05	88%	50%	140%	90%	60%	130%	97%	50%	140%
1,1,2,2-Tetrachloroethane	2585868	2585868	<0.05	<0.05	NA	< 0.05	99%	50%	140%	105%	60%	130%	110%	50%	140%
o-Xylene	2585868	2585868	<0.05	<0.05	NA	< 0.05	107%	50%	140%	90%	60%	130%	98%	50%	140%
1,3-Dichlorobenzene	2585868	2585868	<0.05	<0.05	NA	< 0.05	100%	50%	140%	96%	60%	130%	107%	50%	140%
1,4-Dichlorobenzene	2585868	2585868	<0.05	<0.05	NA	< 0.05	109%	50%	140%	93%	60%	130%	95%	50%	140%
1,2-Dichlorobenzene	2585868	2585868	<0.05	<0.05	NA	< 0.05	115%	50%	140%	117%	60%	130%	102%	50%	140%
n-Hexane	2585868	2585868	<0.05	<0.05	NA	< 0.05	90%	50%	140%	110%	60%	130%	88%	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

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

QA Violation

CLIENT NAME: B.I.G. CONSULTING

AGAT WORK ORDER: 21T759349

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

RPT Date: Jun 17, 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	2585860	BH5-SS3	138%	70%	130%	109%	80%	120%	99%	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

AGAT WORK ORDER: 21T759349

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke

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 7471B and SM 3112 B	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

AGAT WORK ORDER: 21T759349

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke

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
Naphthalene-d8	ORG-91-5106	modified from EPA 3541 and EPA 8270E	GC/MS
Acenaphthene-d10	ORG-91-5106	modified from EPA 3541 and EPA 8270E	GC/MS
Chrysene-d12	ORG-91-5106	modified from EPA 3541 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5009	CCME Tier 1 Method	BALANCE
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS

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

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Method Summary

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PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke

SAMPLED BY:TVH

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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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: BIG Consulting Inc
Contact: Eileen Liu
Address: 505 Consumers Rd #804, Toronto, On
Phone: 647-200-6433 Fax:
Reports to be sent to:
1. Email: eliu@brownfieldsgi.com
2. Email:

Project Information:

Project: ~~~~ BIGC-ENV-462B
Site Location: Cooke
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: BIGConsulting Inc
Contact: Laine Dougherty
Address: 12-5500 Tomken Rd, Mississauga, On, L4W 0
Email: ldougherty@brownfieldsgi.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 *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

Laboratory Use Only

Work Order #: 21T759349
Cooler Quantity: 1 SmC
Arrival Temperatures: 1.8 | 1.3 | 0.5
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Free DCR

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)
BH5-SS3	June 2, 2021	9:50 AM PM	4	S			✓		✓	✓		✓					
BH7-SS2	June 8, 2021	9:30 AM PM	4	S			✓		✓	✓		✓					
BH7-SS5	June 8, 2021	9:55 AM PM	3	S			✓					✓					
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															

Samples Relinquished By (Print Name and Sign): Travis Van Holst	Date: June 10, 2021	Time: 12:00	Samples Received By (Print Name and Sign): NEAL G	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

Page 1 of 1

Nº: T 118454

AGAT Laboratories

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

ATTENTION TO: Eileen Liu

PROJECT: BIGC-ENV-462B

AGAT WORK ORDER: 21T760178

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

WATER ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

DATE REPORTED: Jun 21, 2021

PAGES (INCLUDING COVER): 24

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

				SAMPLE DESCRIPTION:	MW2	MW3	MW4	MW7	MW8	DUP30
				SAMPLE TYPE:	Water	Water	Water	Water	Water	Water
				DATE SAMPLED:	2021-06-11 12:00	2021-06-11 12:30	2021-06-11 13:00	2021-06-11 14:40	2021-06-11 15:30	2021-06-11 12:45
Parameter	Unit	G / S	RDL		2597848	2597851	2597852	2597858	2597859	2597860
Naphthalene	µg/L	1400	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1.8	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	600	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	400	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	580	0.10		0.25	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	2.4	0.10		0.14	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	130	0.20		0.32	<0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	68	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	4.7	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	1	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.52	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	1800	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sediment					No	No	No	No	No	No
Surrogate	Unit	Acceptable Limits								
Naphthalene-d8	%	50-140			93	86	96	85	75	86
Acridine-d9	%	50-140			90	105	85	96	82	105
Terphenyl-d14	%	50-140			81	98	94	92	91	98

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - 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.

2597848-2597860 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 perfomed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2021-06-11
Parameter	Unit	G / S	RDL	2597862
F1 (C6 - C10)	µg/L	750	25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25
F2 (C10 to C16)	µg/L	150	100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				No
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		75.8
Terphenyl	%	60-140		97

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - 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.

2597862 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 perfomed at AGAT Toronto (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

				SAMPLE DESCRIPTION:	MW2	MW3	MW4	MW7	MW8	DUP30
				SAMPLE TYPE:	Water	Water	Water	Water	Water	Water
				DATE SAMPLED:	2021-06-11 12:00	2021-06-11 12:30	2021-06-11 13:00	2021-06-11 14:40	2021-06-11 15:30	2021-06-11 12:45
Parameter	Unit	G / S	RDL		2597848	2597851	2597852	2597858	2597859	2597860
F1 (C6-C10)	µg/L	750	25		<25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25		<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	<100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100		<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	<100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100		<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA	NA	NA
Sediment					Trace	No	No	No	No	No
Surrogate	Unit	Acceptable Limits								
Toluene-d8	% Recovery	50-140			109	100	94.0	116	92.2	110
Terphenyl	% Recovery	60-140			86	94	80	84	102	92

Certified By:

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AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - 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.

2597848-2597852 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.

2597858 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 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.

2597859-2597860 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.

Certified By:

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

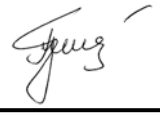
DATE REPORTED: 2021-06-21

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 perfomed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

		SAMPLE DESCRIPTION:		MW2	MW3		MW4		MW5	MW6
		SAMPLE TYPE:		Water	Water		Water		Water	Water
		DATE SAMPLED:		2021-06-11 12:00	2021-06-11 12:30		2021-06-11 13:00		2021-06-11 13:30	2021-06-11 14:00
Parameter	Unit	G / S	RDL	2597848	2597851	RDL	2597852	RDL	2597853	2597857
Dichlorodifluoromethane	µg/L	4400	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	0.34	<0.34	0.17	<0.17	<0.17
Bromomethane	µg/L	5.6	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40	<0.40	0.80	<0.80	0.40	<0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0	<1.0	2.0	<2.0	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	0.30	<0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
Methylene Chloride	µg/L	610	0.30	<0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	190	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	320	0.30	<0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	470000	1.0	<1.0	<1.0	2.0	<2.0	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Chloroform	µg/L	2.4	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	640	0.30	<0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Benzene	µg/L	44	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	16	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	140000	1.0	<1.0	<1.0	2.0	<2.0	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.25	0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	3.3	0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

		SAMPLE DESCRIPTION:		MW2	MW3		MW4		MW5	MW6
		SAMPLE TYPE:		Water	Water		Water		Water	Water
		DATE SAMPLED:		2021-06-11 12:00	2021-06-11 12:30		2021-06-11 13:00		2021-06-11 13:30	2021-06-11 14:00
Parameter	Unit	G / S	RDL	2597848	2597851	RDL	2597852	RDL	2597853	2597857
m & p-Xylene	µg/L		0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Bromoform	µg/L	380	0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Styrene	µg/L	1300	0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	3.2	0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	8	0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	4600	0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	5.2	0.30	<0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	4200	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
n-Hexane	µg/L	51	0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits								
Toluene-d8	% Recovery	50-140		87	96	2	102	1	91	90
4-Bromofluorobenzene	% Recovery	50-140		92	89	2	82	1	78	85

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

SAMPLE DESCRIPTION:				MW7		MW8		DUP30	Trip Blank
SAMPLE TYPE:				Water		Water		Water	Water
DATE SAMPLED:				2021-06-11 14:40		2021-06-11 15:30		2021-06-11 12:45	2021-06-11
Parameter	Unit	G / S	RDL	2597858	RDL	2597859	RDL	2597860	2597862
Dichlorodifluoromethane	µg/L	4400	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.50	<0.50	0.34	<0.34	0.17	<0.17	<0.17
Bromomethane	µg/L	5.6	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	1.60	<1.60	0.80	<0.80	0.40	<0.40	<0.40
Acetone	µg/L	130000	4.0	<4.0	2.0	<2.0	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	1.20	<1.20	0.60	<0.60	0.30	<0.30	<0.30
Methylene Chloride	µg/L	610	1.20	<1.20	0.60	<0.60	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	190	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	320	1.20	<1.20	0.60	<0.60	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	470000	4.0	<4.0	2.0	<2.0	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
Chloroform	µg/L	2.4	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	640	1.20	<1.20	0.60	<0.60	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.79	<0.79	0.40	<0.40	0.20	<0.20	<0.20
Benzene	µg/L	44	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	16	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	140000	4.0	<4.0	2.0	<2.0	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
Toluene	µg/L	18000	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	82000	0.40	<0.40	0.20	<0.20	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.25	0.25	<0.25	0.20	<0.20	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	3.3	0.40	<0.40	0.20	<0.20	0.10	<0.10	<0.10
Chlorobenzene	µg/L	630	0.40	<0.40	0.20	<0.20	0.10	<0.10	<0.10
Ethylbenzene	µg/L	2300	0.40	<0.40	0.20	<0.20	0.10	<0.10	<0.10

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Certificate of Analysis

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

				SAMPLE DESCRIPTION:		MW8		DUP30	Trip Blank
				SAMPLE TYPE:		Water		Water	Water
				DATE SAMPLED:		2021-06-11 15:30		2021-06-11 12:45	2021-06-11
Parameter	Unit	G / S	RDL	2597858	RDL	2597859	RDL	2597860	2597862
m & p-Xylene	µg/L		0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
Bromoform	µg/L	380	0.40	<0.40	0.20	<0.20	0.10	<0.10	<0.10
Styrene	µg/L	1300	0.40	<0.40	0.20	<0.20	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	3.2	0.40	<0.40	0.20	<0.20	0.10	<0.10	<0.10
o-Xylene	µg/L		0.40	<0.40	0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	0.40	<0.40	0.20	<0.20	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	8	0.40	<0.40	0.20	<0.20	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	4600	0.40	<0.40	0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	5.2	0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	4200	0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
n-Hexane	µg/L	51	0.80	<0.80	0.40	<0.40	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits							
Toluene-d8	% Recovery	50-140		85	2	90	1	84	93
4-Bromofluorobenzene	% Recovery	50-140		110	2	87	1	92	93

Certified By:

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AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - 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.

2597848-2597851	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.
2597852	Dilution factor=2 The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used. 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.
2597853-2597857	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.
2597858	Dilution factor=4 The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used. 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.
2597859	Dilution factor=2 The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used. 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.
2597860-2597862	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 perfomed at AGAT Toronto (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

SAMPLE DESCRIPTION:				MW2	MW3		MW4		MW7		MW8
SAMPLE TYPE:				Water	Water		Water		Water		Water
DATE SAMPLED:				2021-06-11 12:00	2021-06-11 12:30		2021-06-11 13:00		2021-06-11 14:40		2021-06-11 15:30
Parameter	Unit	G / S	RDL	2597848	2597851	RDL	2597852	RDL	2597858	RDL	2597859
Dissolved Antimony	µg/L	20000	1.0	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0
Dissolved Arsenic	µg/L	1900	1.0	5.0	6.4	1.0	7.9	1.0	35.8	1.0	13.2
Dissolved Barium	µg/L	29000	2.0	26.1	37.0	2.0	59.2	2.0	178	2.0	84.0
Dissolved Beryllium	µg/L	67	0.50	<0.50	<0.50	0.50	<0.50	0.50	<0.50	0.50	<0.50
Dissolved Boron	µg/L	45000	10.0	53.3	77.0	100.0	3231.4	100.0	5475.2	10.0	108
Dissolved Cadmium	µg/L	2.7	0.20	<0.20	<0.20	0.20	<0.20	0.20	<0.20	0.20	<0.20
Dissolved Chromium	µg/L	810	2.0	<2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0
Dissolved Cobalt	µg/L	66	0.50	<0.50	<0.50	0.50	<0.50	0.50	0.80	0.50	<0.50
Dissolved Copper	µg/L	87	1.0	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	1.5
Dissolved Lead	µg/L	25	0.50	<0.50	<0.50	0.50	<0.50	0.50	0.61	0.50	<0.50
Dissolved Molybdenum	µg/L	9200	0.50	1.00	<0.50	0.50	16.7	0.50	29.7	0.50	0.65
Dissolved Nickel	µg/L	490	3.0	<3.0	<3.0	3.0	<3.0	3.0	3.9	3.0	<3.0
Dissolved Selenium	µg/L	63	1.0	<1.0	<1.0	1.0	<1.0	1.0	181	1.0	1.4
Dissolved Silver	µg/L	1.5	0.20	0.24	<0.20	0.20	<0.20	0.20	<0.20	0.20	<0.20
Dissolved Thallium	µg/L	510	0.30	<0.30	<0.30	0.30	<0.30	0.30	<0.30	0.30	<0.30
Dissolved Uranium	µg/L	420	0.50	0.63	0.56	0.50	1.36	0.50	6.23	0.50	1.02
Dissolved Vanadium	µg/L	250	0.40	<0.40	<0.40	0.40	0.73	0.40	0.64	0.40	0.46
Dissolved Zinc	µg/L	1100	5.0	<5.0	<5.0	5.0	9.0	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	<0.02	0.02	<0.02
Chromium VI	µg/L	140	2.000	<2.000	<2.000	2.000	<2.000	2.000	<2.000	2.000	<2.000
Cyanide, Free	µg/L	66	2	<2	<2	2	<2	2	<2	2	<2
Dissolved Sodium	µg/L	2300000	250	64100	88900	250	307000	250	3590000	250	155000
Chloride	µg/L	2300000	100	77400	186000	100	562000	1220	13400000	100	303000
Electrical Conductivity	uS/cm	NA	2	802	1100	2	2260	2	33700	2	1590
pH	pH Units		NA	7.61	7.55	NA	7.67	NA	6.71	NA	7.78

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

				SAMPLE DESCRIPTION:	DUP30
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2021-06-11 12:45
Parameter	Unit	G / S	RDL		2597860
Dissolved Antimony	µg/L	20000	1.0		<1.0
Dissolved Arsenic	µg/L	1900	1.0		7.2
Dissolved Barium	µg/L	29000	2.0		35.6
Dissolved Beryllium	µg/L	67	0.50		<0.50
Dissolved Boron	µg/L	45000	10.0		85.9
Dissolved Cadmium	µg/L	2.7	0.20		<0.20
Dissolved Chromium	µg/L	810	2.0		<2.0
Dissolved Cobalt	µg/L	66	0.50		<0.50
Dissolved Copper	µg/L	87	1.0		<1.0
Dissolved Lead	µg/L	25	0.50		<0.50
Dissolved Molybdenum	µg/L	9200	0.50		0.65
Dissolved Nickel	µg/L	490	3.0		<3.0
Dissolved Selenium	µg/L	63	1.0		<1.0
Dissolved Silver	µg/L	1.5	0.20		<0.20
Dissolved Thallium	µg/L	510	0.30		<0.30
Dissolved Uranium	µg/L	420	0.50		<0.50
Dissolved Vanadium	µg/L	250	0.40		<0.40
Dissolved Zinc	µg/L	1100	5.0		<5.0
Mercury	µg/L	0.29	0.02		<0.02
Chromium VI	µg/L	140	2.000		<2.000
Cyanide, Free	µg/L	66	2		<2
Dissolved Sodium	µg/L	2300000	250		92200
Chloride	µg/L	2300000	100		186000
Electrical Conductivity	uS/cm	NA	2		1100
pH	pH Units		NA		7.64

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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

DATE RECEIVED: 2021-06-11

DATE REPORTED: 2021-06-21

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - 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.

2597848-2597860 Metals analysis completed on a filtered sample.
Dilution required, RDL has been increased accordingly.

Analysis perfomed at AGAT Toronto (unless marked by *)

Certified By:



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Exceedance Summary

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
2597858	MW7	ON T3 NPGW CT	O. Reg. 153(511) - Metals & Inorganics (Water)	Chloride	µg/L	2300000	13400000
2597858	MW7	ON T3 NPGW CT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Selenium	µg/L	63	181
2597858	MW7	ON T3 NPGW CT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Sodium	µg/L	2300000	3590000

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T760178
PROJECT: BIGC-ENV-462B
ATTENTION TO: Eileen Liu
SAMPLING SITE:1062 and 1074 Cooke Boulevard
SAMPLED BY:

Trace Organics Analysis

RPT Date: Jun 21, 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 (Water)															
Dichlorodifluoromethane	2596040		<0.20	<0.20	NA	< 0.20	86%	50%	140%	94%	50%	140%	92%	50%	140%
Vinyl Chloride	2596040		<0.17	<0.17	NA	< 0.17	108%	50%	140%	86%	50%	140%	88%	50%	140%
Bromomethane	2596040		<0.20	<0.20	NA	< 0.20	92%	50%	140%	91%	50%	140%	84%	50%	140%
Trichlorofluoromethane	2596040		<0.40	<0.40	NA	< 0.40	93%	50%	140%	114%	50%	140%	90%	50%	140%
Acetone	2596040		<1.0	<1.0	NA	< 1.0	99%	50%	140%	104%	50%	140%	109%	50%	140%
1,1-Dichloroethylene	2596040		<0.30	<0.30	NA	< 0.30	83%	50%	140%	91%	60%	130%	83%	50%	140%
Methylene Chloride	2596040		<0.30	<0.30	NA	< 0.30	111%	50%	140%	109%	60%	130%	108%	50%	140%
trans- 1,2-Dichloroethylene	2596040		<0.20	<0.20	NA	< 0.20	87%	50%	140%	80%	60%	130%	78%	50%	140%
Methyl tert-butyl ether	2596040		<0.20	<0.20	NA	< 0.20	78%	50%	140%	95%	60%	130%	84%	50%	140%
1,1-Dichloroethane	2596040		<0.30	<0.30	NA	< 0.30	89%	50%	140%	119%	60%	130%	95%	50%	140%
Methyl Ethyl Ketone	2596040		<1.0	<1.0	NA	< 1.0	97%	50%	140%	90%	50%	140%	108%	50%	140%
cis- 1,2-Dichloroethylene	2596040		<0.20	<0.20	NA	< 0.20	80%	50%	140%	102%	60%	130%	94%	50%	140%
Chloroform	2596040		<0.20	<0.20	NA	< 0.20	94%	50%	140%	110%	60%	130%	109%	50%	140%
1,2-Dichloroethane	2596040		<0.20	<0.20	NA	< 0.20	92%	50%	140%	108%	60%	130%	103%	50%	140%
1,1,1-Trichloroethane	2596040		<0.30	<0.30	NA	< 0.30	86%	50%	140%	101%	60%	130%	106%	50%	140%
Carbon Tetrachloride	2596040		<0.20	<0.20	NA	< 0.20	91%	50%	140%	91%	60%	130%	102%	50%	140%
Benzene	2596040		<0.20	<0.20	NA	< 0.20	96%	50%	140%	105%	60%	130%	99%	50%	140%
1,2-Dichloropropane	2596040		<0.20	<0.20	NA	< 0.20	82%	50%	140%	92%	60%	130%	113%	50%	140%
Trichloroethylene	2596040		<0.20	<0.20	NA	< 0.20	75%	50%	140%	102%	60%	130%	89%	50%	140%
Bromodichloromethane	2596040		<0.20	<0.20	NA	< 0.20	101%	50%	140%	103%	60%	130%	102%	50%	140%
Methyl Isobutyl Ketone	2596040		<1.0	<1.0	NA	< 1.0	101%	50%	140%	102%	50%	140%	111%	50%	140%
1,1,2-Trichloroethane	2596040		<0.20	<0.20	NA	< 0.20	117%	50%	140%	92%	60%	130%	96%	50%	140%
Toluene	2596040		<0.20	<0.20	NA	< 0.20	83%	50%	140%	93%	60%	130%	97%	50%	140%
Dibromochloromethane	2596040		<0.10	<0.10	NA	< 0.10	101%	50%	140%	91%	60%	130%	96%	50%	140%
Ethylene Dibromide	2596040		<0.10	<0.10	NA	< 0.10	113%	50%	140%	76%	60%	130%	101%	50%	140%
Tetrachloroethylene	2596040		<0.20	<0.20	NA	< 0.20	79%	50%	140%	103%	60%	130%	88%	50%	140%
1,1,1,2-Tetrachloroethane	2596040		<0.10	<0.10	NA	< 0.10	89%	50%	140%	115%	60%	130%	104%	50%	140%
Chlorobenzene	2596040		<0.10	<0.10	NA	< 0.10	98%	50%	140%	88%	60%	130%	90%	50%	140%
Ethylbenzene	2596040		<0.10	<0.10	NA	< 0.10	84%	50%	140%	111%	60%	130%	89%	50%	140%
m & p-Xylene	2596040		<0.20	<0.20	NA	< 0.20	87%	50%	140%	104%	60%	130%	106%	50%	140%
Bromoform	2596040		<0.10	<0.10	NA	< 0.10	112%	50%	140%	92%	60%	130%	104%	50%	140%
Styrene	2596040		<0.10	<0.10	NA	< 0.10	91%	50%	140%	91%	60%	130%	98%	50%	140%
1,1,2,2-Tetrachloroethane	2596040		<0.10	<0.10	NA	< 0.10	115%	50%	140%	104%	60%	130%	106%	50%	140%
o-Xylene	2596040		<0.10	<0.10	NA	< 0.10	97%	50%	140%	92%	60%	130%	110%	50%	140%
1,3-Dichlorobenzene	2596040		<0.10	<0.10	NA	< 0.10	99%	50%	140%	114%	60%	130%	108%	50%	140%
1,4-Dichlorobenzene	2596040		<0.10	<0.10	NA	< 0.10	101%	50%	140%	109%	60%	130%	95%	50%	140%
1,2-Dichlorobenzene	2596040		<0.10	<0.10	NA	< 0.10	93%	50%	140%	102%	60%	130%	83%	50%	140%
n-Hexane	2596040		<0.20	<0.20	NA	< 0.20	106%	50%	140%	109%	60%	130%	95%	50%	140%

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T760178
PROJECT: BIGC-ENV-462B
ATTENTION TO: Eileen Liu
SAMPLING SITE:1062 and 1074 Cooke Boulevard
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jun 21, 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 (Water)															
Dichlorodifluoromethane	2617906		<0.20	<0.20	NA	< 0.20	104%	50%	140%	89%	50%	140%	91%	50%	140%
Vinyl Chloride	2617906		<0.17	<0.17	NA	< 0.17	84%	50%	140%	103%	50%	140%	89%	50%	140%
Bromomethane	2617906		<0.20	<0.20	NA	< 0.20	87%	50%	140%	97%	50%	140%	98%	50%	140%
Trichlorofluoromethane	2617906		<0.40	<0.40	NA	< 0.40	79%	50%	140%	110%	50%	140%	90%	50%	140%
Acetone	2617906		<1.0	<1.0	NA	< 1.0	104%	50%	140%	88%	50%	140%	105%	50%	140%
1,1-Dichloroethylene	2617906		<0.30	<0.30	NA	< 0.30	93%	50%	140%	87%	60%	130%	90%	50%	140%
Methylene Chloride	2617906		<0.30	<0.30	NA	< 0.30	102%	50%	140%	107%	60%	130%	117%	50%	140%
trans- 1,2-Dichloroethylene	2617906		<0.20	<0.20	NA	< 0.20	93%	50%	140%	77%	60%	130%	78%	50%	140%
Methyl tert-butyl ether	2617906		<0.20	<0.20	NA	< 0.20	77%	50%	140%	97%	60%	130%	91%	50%	140%
1,1-Dichloroethane	2617906		<0.30	<0.30	NA	< 0.30	94%	50%	140%	88%	60%	130%	97%	50%	140%
Methyl Ethyl Ketone	2617906		<1.0	<1.0	NA	< 1.0	109%	50%	140%	88%	50%	140%	103%	50%	140%
cis- 1,2-Dichloroethylene	2617906		<0.20	<0.20	NA	< 0.20	103%	50%	140%	103%	60%	130%	91%	50%	140%
Chloroform	2617906		<0.20	<0.20	NA	< 0.20	112%	50%	140%	101%	60%	130%	88%	50%	140%
1,2-Dichloroethane	2617906		<0.20	<0.20	NA	< 0.20	116%	50%	140%	110%	60%	130%	96%	50%	140%
1,1,1-Trichloroethane	2617906		<0.30	<0.30	NA	< 0.30	76%	50%	140%	76%	60%	130%	100%	50%	140%
Carbon Tetrachloride	2617906		<0.20	<0.20	NA	< 0.20	78%	50%	140%	86%	60%	130%	85%	50%	140%
Benzene	2617906		<0.20	<0.20	NA	< 0.20	109%	50%	140%	112%	60%	130%	115%	50%	140%
1,2-Dichloropropane	2617906		<0.20	<0.20	NA	< 0.20	108%	50%	140%	118%	60%	130%	95%	50%	140%
Trichloroethylene	2617906		<0.20	<0.20	NA	< 0.20	110%	50%	140%	100%	60%	130%	89%	50%	140%
Bromodichloromethane	2617906		<0.20	<0.20	NA	< 0.20	91%	50%	140%	91%	60%	130%	91%	50%	140%
Methyl Isobutyl Ketone	2617906		<1.0	<1.0	NA	< 1.0	97%	50%	140%	103%	50%	140%	97%	50%	140%
1,1,2-Trichloroethane	2617906		<0.20	<0.20	NA	< 0.20	86%	50%	140%	101%	60%	130%	101%	50%	140%
Toluene	2617906		<0.20	<0.20	NA	< 0.20	92%	50%	140%	107%	60%	130%	82%	50%	140%
Dibromochloromethane	2617906		<0.10	<0.10	NA	< 0.10	95%	50%	140%	96%	60%	130%	87%	50%	140%
Ethylene Dibromide	2617906		<0.10	<0.10	NA	< 0.10	87%	50%	140%	106%	60%	130%	97%	50%	140%
Tetrachloroethylene	2617906		<0.20	<0.20	NA	< 0.20	90%	50%	140%	97%	60%	130%	82%	50%	140%
1,1,1,2-Tetrachloroethane	2617906		<0.10	<0.10	NA	< 0.10	107%	50%	140%	103%	60%	130%	99%	50%	140%
Chlorobenzene	2617906		<0.10	<0.10	NA	< 0.10	115%	50%	140%	99%	60%	130%	92%	50%	140%
Ethylbenzene	2617906		<0.10	<0.10	NA	< 0.10	101%	50%	140%	91%	60%	130%	81%	50%	140%
m & p-Xylene	2617906		<0.20	<0.20	NA	< 0.20	110%	50%	140%	106%	60%	130%	90%	50%	140%
Bromoform	2617906		<0.10	<0.10	NA	< 0.10	102%	50%	140%	82%	60%	130%	75%	50%	140%
Styrene	2617906		<0.10	<0.10	NA	< 0.10	102%	50%	140%	97%	60%	130%	87%	50%	140%
1,1,2,2-Tetrachloroethane	2617906		<0.10	<0.10	NA	< 0.10	96%	50%	140%	101%	60%	130%	107%	50%	140%
o-Xylene	2617906		<0.10	<0.10	NA	< 0.10	102%	50%	140%	86%	60%	130%	99%	50%	140%
1,3-Dichlorobenzene	2617906		<0.10	<0.10	NA	< 0.10	108%	50%	140%	90%	60%	130%	104%	50%	140%
1,4-Dichlorobenzene	2617906		<0.10	<0.10	NA	< 0.10	115%	50%	140%	82%	60%	130%	115%	50%	140%
1,2-Dichlorobenzene	2617906		<0.10	<0.10	NA	< 0.10	97%	50%	140%	106%	60%	130%	107%	50%	140%
n-Hexane	2617906		<0.20	<0.20	NA	< 0.20	84%	50%	140%	80%	60%	130%	76%	50%	140%

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T760178
PROJECT: BIGC-ENV-462B
ATTENTION TO: Eileen Liu
SAMPLING SITE:1062 and 1074 Cooke Boulevard
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Jun 21, 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)	2597848	2597848	<25	<25	NA	< 25	104%	60%	140%	100%	60%	140%	104%	60%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	2597851	2597851	< 0.20	< 0.20	NA	< 0.20	109%	50%	140%	94%	50%	140%	98%	50%	140%
Acenaphthylene	2597851	2597851	< 0.20	< 0.20	NA	< 0.20	112%	50%	140%	102%	50%	140%	99%	50%	140%
Acenaphthene	2597851	2597851	< 0.20	< 0.20	NA	< 0.20	104%	50%	140%	100%	50%	140%	98%	50%	140%
Fluorene	2597851	2597851	< 0.20	< 0.20	NA	< 0.20	111%	50%	140%	114%	50%	140%	107%	50%	140%
Phenanthrene	2597851	2597851	< 0.10	< 0.10	NA	< 0.10	102%	50%	140%	111%	50%	140%	97%	50%	140%
Anthracene	2597851	2597851	< 0.10	< 0.10	NA	< 0.10	114%	50%	140%	118%	50%	140%	107%	50%	140%
Fluoranthene	2597851	2597851	< 0.20	< 0.20	NA	< 0.20	109%	50%	140%	124%	50%	140%	105%	50%	140%
Pyrene	2597851	2597851	< 0.20	< 0.20	NA	< 0.20	108%	50%	140%	106%	50%	140%	107%	50%	140%
Benzo(a)anthracene	2597851	2597851	< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	106%	50%	140%	85%	50%	140%
Chrysene	2597851	2597851	< 0.10	< 0.10	NA	< 0.10	115%	50%	140%	108%	50%	140%	108%	50%	140%
Benzo(b)fluoranthene	2597851	2597851	< 0.10	< 0.10	NA	< 0.10	76%	50%	140%	117%	50%	140%	99%	50%	140%
Benzo(k)fluoranthene	2597851	2597851	< 0.10	< 0.10	NA	< 0.10	79%	50%	140%	103%	50%	140%	113%	50%	140%
Benzo(a)pyrene	2597851	2597851	< 0.01	< 0.01	NA	< 0.01	70%	50%	140%	102%	50%	140%	101%	50%	140%
Indeno(1,2,3-cd)pyrene	2597851	2597851	< 0.20	< 0.20	NA	< 0.20	66%	50%	140%	72%	50%	140%	73%	50%	140%
Dibenz(a,h)anthracene	2597851	2597851	< 0.20	< 0.20	NA	< 0.20	70%	50%	140%	81%	50%	140%	71%	50%	140%
Benzo(g,h,i)perylene	2597851	2597851	< 0.20	< 0.20	NA	< 0.20	65%	50%	140%	74%	50%	140%	81%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6-C10)	2597848	2597848	<25	<25	NA	< 25	104%	60%	140%	100%	60%	140%	104%	60%	140%
F2 (C10 to C16)	2597860	2597860	< 100	< 100	NA	< 100	116%	60%	140%	92%	60%	140%	82%	60%	140%
F3 (C16 to C34)	2597860	2597860	< 100	< 100	NA	< 100	109%	60%	140%	103%	60%	140%	85%	60%	140%
F4 (C34 to C50)	2597860	2597860	< 100	< 100	NA	< 100	94%	60%	140%	85%	60%	140%	90%	60%	140%

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

Certified By:

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T760178
PROJECT: BIGC-ENV-462B
ATTENTION TO: Eileen Liu
SAMPLING SITE:1062 and 1074 Cooke Boulevard
SAMPLED BY:

Water Analysis

RPT Date: Jun 21, 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	2597848	2597848	< 1.0	<1.0	NA	< 1.0	101%	70%	130%	98%	80%	120%	105%	70%	130%
Dissolved Arsenic	2597848	2597848	5.0	5.1	2.0%	< 1.0	91%	70%	130%	99%	80%	120%	108%	70%	130%
Dissolved Barium	2597848	2597848	26.1	26.2	0.4%	< 2.0	100%	70%	130%	98%	80%	120%	103%	70%	130%
Dissolved Beryllium	2597848	2597848	< 0.50	<0.50	NA	< 0.50	96%	70%	130%	96%	80%	120%	109%	70%	130%
Dissolved Boron	2597848	2597848	53.3	59.1	10.3%	< 10.0	99%	70%	130%	102%	80%	120%	102%	70%	130%
Dissolved Cadmium	2597848	2597848	< 0.20	<0.20	NA	< 0.20	101%	70%	130%	101%	80%	120%	108%	70%	130%
Dissolved Chromium	2597848	2597848	< 2.0	<2.0	NA	< 2.0	100%	70%	130%	99%	80%	120%	108%	70%	130%
Dissolved Cobalt	2597848	2597848	< 0.50	<0.50	NA	< 0.50	101%	70%	130%	99%	80%	120%	106%	70%	130%
Dissolved Copper	2597848	2597848	< 1.0	<1.0	NA	< 1.0	98%	70%	130%	100%	80%	120%	104%	70%	130%
Dissolved Lead	2597848	2597848	< 0.50	<0.50	NA	< 0.50	92%	70%	130%	91%	80%	120%	92%	70%	130%
Dissolved Molybdenum	2597848	2597848	1.00	1.08	NA	< 0.50	96%	70%	130%	101%	80%	120%	113%	70%	130%
Dissolved Nickel	2597848	2597848	< 3.0	<3.0	NA	< 3.0	102%	70%	130%	97%	80%	120%	104%	70%	130%
Dissolved Selenium	2597848	2597848	< 1.0	<1.0	NA	< 1.0	99%	70%	130%	102%	80%	120%	111%	70%	130%
Dissolved Silver	2597848	2597848	0.24	<0.20	NA	< 0.20	100%	70%	130%	102%	80%	120%	107%	70%	130%
Dissolved Thallium	2597848	2597848	< 0.30	<0.30	NA	< 0.30	87%	70%	130%	103%	80%	120%	106%	70%	130%
Dissolved Uranium	2597848	2597848	0.63	0.67	NA	< 0.50	100%	70%	130%	99%	80%	120%	106%	70%	130%
Dissolved Vanadium	2597848	2597848	< 0.40	<0.40	NA	< 0.40	102%	70%	130%	98%	80%	120%	104%	70%	130%
Dissolved Zinc	2597848	2597848	< 5.0	<5.0	NA	< 5.0	98%	70%	130%	115%	80%	120%	124%	70%	130%
Mercury	2597804		<0.02	<0.02	NA	< 0.02	101%	70%	130%	96%	80%	120%	92%	70%	130%
Chromium VI	2592481		<2.000	<2.000	NA	< 2	100%	70%	130%	106%	80%	120%	102%	70%	130%
Cyanide, Free	2597848	2597848	<2	<2	NA	< 2	99%	70%	130%	102%	80%	120%	105%	70%	130%
Dissolved Sodium	2612387		34800	34800	0.0%	< 50	99%	70%	130%	98%	80%	120%	98%	70%	130%
Chloride	2597848	2597848	77400	79100	2.2%	< 100	98%	70%	130%	96%	80%	120%	108%	70%	130%
Electrical Conductivity	2590657		783	781	0.3%	< 2	105%	90%	110%	NA			NA		
pH	2590657		7.74	7.77	0.4%	NA	102%	98%	103%	NA			NA		

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	2597858	2597858	<2.000	<2.000	NA	< 2	100%	70%	130%	101%	80%	120%	97%	70%	130%

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

Certified By:



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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories
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Method Summary

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T760178
PROJECT: BIGC-ENV-462B
ATTENTION TO: Eileen Liu
SAMPLING SITE:1062 and 1074 Cooke Boulevard
SAMPLED BY:

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-91-5009	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
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID

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Method Summary

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

AGAT WORK ORDER: 21T760178

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
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: 21T760178

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

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: 21T760178

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1062 and 1074 Cooke Boulevard

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	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

Results relate only to the items tested. Results apply to samples as received.

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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 #: 21T760178
Cooler Quantity: 1 Bill (1 day of ice pack)
Arrival Temperatures: 21.9 | 22.1 | 21.7
Custody Seal Intact: ☑ Yes ☐ No ☐ N/A
Notes:

Report Information:
Company: B.I.G. Consulting
Contact: Eileen Liu
Address: 12-5500 Tomken Road
Mississauga, Ontario L4W 2Z4
Phone: ____ Fax: ____
Reports to be sent to:
1. Email: eliu@brownfieldigi.com
2. Email:

Regulatory Requirements:
(Please check all applicable boxes)
☑ Regulation 153/04 — Table 3 (Indicate One) — ☐ Ind/Com ☑ Res/Park ☐ Agriculture
Soil Texture (Check One): ☑ Coarse (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 Analyses) ☑ 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-462B
Site Location: 1062 and 1074 Cooke Boulevard.
Sampled By:
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:
Contact:
Address:
Email: ldougherty@brownfieldigi.com; NKepics@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, DOC (Y/N)	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs Analyze F4G if required ☑ Yes ☐ No	PAHs	Total PCBs ☐ Aroclor	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach	SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
MW2	21/06/11	1200 AM/PM	16	GW		Y	✓		✓	✓		✓						✓
MW3		1230 AM/PM	16			Y	✓		✓	✓		✓						
MW4		1200 AM/PM	16			Y	✓		✓	✓		✓						
MW5		1330 AM/PM	3									✓						
MW6		1490 AM/PM	3									✓						
MW7		1440 AM/PM	16			Y	✓		✓	✓		✓						
MW8		1530 AM/PM	16			Y	✓		✓	✓		✓						
DUP30		1245 AM/PM	16			Y	✓		✓	✓		✓						
Trip blank		AM/PM	8						✓			✓						✓
		AM/PM																
		AM/PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Shirley L.	21/06/11	1800	Neil Ramnarain		
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

21 Jun 11 05:45pm
Page 1 of 1
N°:

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

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http://www.agatlabs.com

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

ATTENTION TO: Eileen Liu

PROJECT: BIGC-ENV-462B

AGAT WORK ORDER: 21T763049

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

DATE REPORTED: Jun 22, 2021

PAGES (INCLUDING COVER): 5

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 21T763049

PROJECT: BIGC-ENV-462B

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1044 Cooke Blvd, Burlington

SAMPLED BY:AB

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

DATE RECEIVED: 2021-06-18

DATE REPORTED: 2021-06-22

				SAMPLE DESCRIPTION:	BH3-SS5
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-05-31 09:25
Parameter	Unit	G / S	RDL		2625552
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		0.08
Anthracene	µg/g	0.67	0.05		<0.05
Fluoranthene	µg/g	0.69	0.05		0.10
Pyrene	µg/g	78	0.05		<0.05
Benz(a)anthracene	µg/g	0.5	0.05		0.06
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		11.6
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140			101
Acridine-d9	%	50-140			98
Terphenyl-d14	%	50-140			85

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

2625552 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 perfomed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Quality Assurance

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

AGAT WORK ORDER: 21T763049

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1044 Cooke Blvd, Burlington

SAMPLED BY:AB

Trace Organics Analysis

RPT Date: Jun 22, 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	2603062		<0.05	<0.05	NA	< 0.05	91%	50%	140%	62%	50%	140%	77%	50%	140%
Acenaphthylene	2603062		<0.05	<0.05	NA	< 0.05	119%	50%	140%	77%	50%	140%	108%	50%	140%
Acenaphthene	2603062		<0.05	<0.05	NA	< 0.05	108%	50%	140%	72%	50%	140%	89%	50%	140%
Fluorene	2603062		<0.05	<0.05	NA	< 0.05	117%	50%	140%	76%	50%	140%	94%	50%	140%
Phenanthrene	2603062		<0.05	<0.05	NA	< 0.05	105%	50%	140%	70%	50%	140%	94%	50%	140%
Anthracene	2603062		<0.05	<0.05	NA	< 0.05	111%	50%	140%	80%	50%	140%	82%	50%	140%
Fluoranthene	2603062		<0.05	<0.05	NA	< 0.05	96%	50%	140%	62%	50%	140%	70%	50%	140%
Pyrene	2603062		<0.05	<0.05	NA	< 0.05	89%	50%	140%	62%	50%	140%	62%	50%	140%
Benz(a)anthracene	2603062		<0.05	<0.05	NA	< 0.05	60%	50%	140%	78%	50%	140%	101%	50%	140%
Chrysene	2603062		<0.05	<0.05	NA	< 0.05	64%	50%	140%	99%	50%	140%	98%	50%	140%
Benzo(b)fluoranthene	2603062		<0.05	<0.05	NA	< 0.05	100%	50%	140%	62%	50%	140%	103%	50%	140%
Benzo(k)fluoranthene	2603062		<0.05	<0.05	NA	< 0.05	100%	50%	140%	97%	50%	140%	131%	50%	140%
Benzo(a)pyrene	2603062		<0.05	0.06	NA	< 0.05	104%	50%	140%	93%	50%	140%	133%	50%	140%
Indeno(1,2,3-cd)pyrene	2603062		<0.05	<0.05	NA	< 0.05	105%	50%	140%	68%	50%	140%	101%	50%	140%
Dibenz(a,h)anthracene	2603062		<0.05	<0.05	NA	< 0.05	107%	50%	140%	74%	50%	140%	111%	50%	140%
Benzo(g,h,i)perylene	2603062		<0.05	<0.05	NA	< 0.05	105%	50%	140%	79%	50%	140%	133%	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:

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Results relate only to the items tested. Results apply to samples as received.

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http://www.agatlabs.com

Method Summary

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

AGAT WORK ORDER: 21T763049

PROJECT: BIGC-ENV-462B

ATTENTION TO: Eileen Liu

SAMPLING SITE:1044 Cooke Blvd, Burlington

SAMPLED BY:AB

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
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5009	CCME Tier 1 Method	BALANCE

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories
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Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

LH B/K

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: Eileen Liu
Address: 505 Consumers Road, Suite 804
Toronto ON M2J 4V8 Canada
Phone: 647.200.6437 Fax:
Reports to be sent to:
1. Email: eliu@brownfieldigi.com
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

- [x] Regulation 153/04 — Table 3 (Indicate One) — [ ] Ind/Com [x] Res/Park [ ] Agriculture
- Soil Texture (Check One): [x] 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?** [x] Yes [ ] No

Report Guideline on *Certificate of Analysis* [x] Yes [ ] No

Project Information:

Project: BIGC-ENV-462B
Site Location: 1044 Cooke Blvd, Burlington
Sampled By: AB
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
Email: ON, L4W 2Z4 Canada
→ ldougherty@brownfieldigi.com

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 21T763049
Cooler Quantity:
Arrival Temperatures: 3.2
Custody Seal Intact: [ ] Yes [ ] No [ ] N/A
Notes: Bagged ice

Turnaround Time (TAT) Required:

Regular TAT [x] 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

[ ] 3 Business Days [x] 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 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: PCBs	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)
BH3-SS5	May 31	9:25 AM/PM	1	S	Limited Recovery	N				✓							N
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

21 JUN 18 12:35 PM

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Sai S	18/JUN/2021	11:50 HRS	SIMRAN		

Page of

N°

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: B.I.G. CONSULTING
804-505 CONSUMERS ROAD
TORONTO, ON M2J 4V8

ATTENTION TO: Eileen Liu

PROJECT: BIGC-ENV-462D

AGAT WORK ORDER: 21T766734

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

DATE REPORTED: Jul 06, 2021

PAGES (INCLUDING COVER): 6

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 21T766734

PROJECT: BIGC-ENV-462D

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-06-25

DATE REPORTED: 2021-07-06

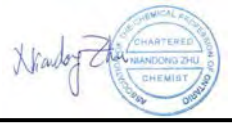
				SAMPLE DESCRIPTION:	BH2A-SS6
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-06-25 10:30
Parameter	Unit	G / S	RDL	2662064	
pH, 2:1 CaCl2 Extraction	pH Units		NA	10.7	

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

2662064 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis perfomed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING
AGAT WORK ORDER: 21T766734

PROJECT: BIGC-ENV-462D
ATTENTION TO: Eileen Liu

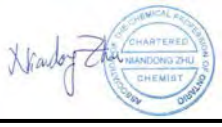
SAMPLING SITE:1074 Cooke
SAMPLED BY:TVH

Soil Analysis

RPT Date: Jul 06, 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) - ORPs (Soil)															
pH, 2:1 CaCl2 Extraction	2680116		7.23	7.23	0.0%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

Certified By:



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Results relate only to the items tested. Results apply to samples as received.

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http://www.agatlabs.com

Method Summary

CLIENT NAME: B.I.G. CONSULTING

AGAT WORK ORDER: 21T766734

PROJECT: BIGC-ENV-462D

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

SAMPLED BY:TVH

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

Results relate only to the items tested. Results apply to samples as received.

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

Chain of Custody Record

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

Laboratory Use Only
Work Order #: 21T766734
Cooler Quantity: 4 and blue
Arrival Temperatures: 9.8 | 9.1 | 9.3
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Bagged Ice

Report Information:
Company: BIG Consulting Inc
Contact: Eileen Liu
Address: 505 Consumers Road, Suite 804 Toronto, Ontario, Canada M2J 4Y
Phone: 647-200-6433 Fax:
Reports to be sent to:
1. Email: eliu@brownfieldigi.com
2. Email:

Project Information:
Project: BIGC-ENV-462D
Site Location: 1074 Cooke
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: BIG Consulting Inc
Contact: Laine Dougherty
Address: 12-5500 Tomken Road Mississauga, Ontario L4W 2Z4, Canada
Email: ldougherty@brownfieldigi.com

Regulatory Requirements:
(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture
Soil Texture (Check One)
☑ Coarse
☐ Fine

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

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

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

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

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	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: PCBs	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	pH	Potentially Hazardous or High Concentration (Y/N)
BH2A-SS6	25/06/2021	10:30 AM PM	1	S														☑	
		AM PM																	
		AM PM																	
		AM PM																	
		AM PM																	
		AM PM																	
		AM PM																	
		AM PM																	
		AM PM																	
		AM PM																	
		AM PM																	

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Travis Van Holst	25/06/2021	6:55pm	Haeli D		
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 JUN 25 6:55pm
Page 1 of 1
N°:

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

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: B.I.G. CONSULTING
804-505 CONSUMERS ROAD
TORONTO, ON M2J 4V8

ATTENTION TO: Eileen Liu

PROJECT: BIGC-ENV-462D

AGAT WORK ORDER: 21T766738

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

DATE REPORTED: Jul 06, 2021

PAGES (INCLUDING COVER): 5

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 21T766738

PROJECT: BIGC-ENV-462D

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-06-25

DATE REPORTED: 2021-07-06

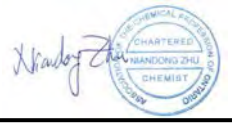
				SAMPLE DESCRIPTION:	BH2C-SS6
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-06-25 13:20
Parameter	Unit	G / S	RDL	2662068	
pH, 2:1 CaCl2 Extraction	pH Units		NA	10.8	

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

2662068 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis perfomed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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FAX (905)712-5122
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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING

AGAT WORK ORDER: 21T766738

PROJECT: BIGC-ENV-462D

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

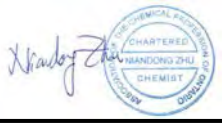
SAMPLED BY:TVH

Soil Analysis

RPT Date: Jul 06, 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) - ORPs (Soil)															
pH, 2:1 CaCl2 Extraction	2680116		7.23	7.23	0.0%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

Certified By:



AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
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Method Summary

CLIENT NAME: B.I.G. CONSULTING

AGAT WORK ORDER: 21T766738

PROJECT: BIGC-ENV-462D

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

SAMPLED BY:TVH

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

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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: BIG Consulting Inc
Contact: Eileen Liu
Address: 505 Consumers Road, Suite 804 Toronto, Ontario, Canada M2J 4H
Phone: 647-200-6433 Fax:
Reports to be sent to:
1. Email: eliu@brownfieldigi.com
2. Email:

Project Information:

Project: BIGC-ENV-462D
Site Location: 1074 Cooke
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: BIG Consulting Inc
Contact: Laine Dougherty
Address: 12-5500 Tomken Road Mississauga, Ontario L4W 2Z4, Canada
Email: ldougherty@brownfieldigi.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 (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

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 21T766738
Cooler Quantity: 1 red blue
Arrival Temperatures: 9.8 | 9.1 | 9.3
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Bagged Ice

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

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: PCBs	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	pH	Potentially Hazardous or High Concentration (Y/N)
BH2C-SS6	25/06/2021	1:20 AM PM	1	S													☑	
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Travis Van Holst	25/06/2021	6:55pm	Hadi D		
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

N°:

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AGAT Laboratories

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

CLIENT NAME: B.I.G. CONSULTING
804-505 CONSUMERS ROAD
TORONTO, ON M2J 4V8

ATTENTION TO: Eileen Liu

PROJECT: BIGC-ENV-462D

AGAT WORK ORDER: 21T766741

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jul 06, 2021

PAGES (INCLUDING COVER): 6

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T766741

PROJECT: BIGC-ENV-462D

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-06-25

DATE REPORTED: 2021-07-06

		SAMPLE DESCRIPTION:		BH3A-SS2
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2021-06-25 14:20
Parameter	Unit	G / S	RDL	2662078
Naphthalene	µg/g	0.6	0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	0.17
Acenaphthene	µg/g	7.9	0.05	0.14
Fluorene	µg/g	62	0.05	0.18
Phenanthrene	µg/g	6.2	0.05	1.54
Anthracene	µg/g	0.67	0.05	0.45
Fluoranthene	µg/g	0.69	0.05	2.28
Pyrene	µg/g	78	0.05	1.98
Benz(a)anthracene	µg/g	0.5	0.05	1.17
Chrysene	µg/g	7	0.05	1.18
Benzo(b)fluoranthene	µg/g	0.78	0.05	1.63
Benzo(k)fluoranthene	µg/g	0.78	0.05	0.45
Benzo(a)pyrene	µg/g	0.3	0.05	1.07
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	0.47
Dibenz(a,h)anthracene	µg/g	0.1	0.05	0.09
Benzo(g,h,i)perylene	µg/g	6.6	0.05	0.49
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05
Moisture Content	%		0.1	19.5
Surrogate	Unit	Acceptable Limits		
Naphthalene-d8	%	50-140		92
Acridine-d9	%	50-140		76
Terphenyl-d14	%	50-140		104

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

2662078 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 perfomed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Exceedance Summary

AGAT WORK ORDER: 21T766741

PROJECT: BIGC-ENV-462D

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
2662078	BH3A-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Acenaphthylene	µg/g	0.15	0.17
2662078	BH3A-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Benz(a)anthracene	µg/g	0.5	1.17
2662078	BH3A-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Benzo(a)pyrene	µg/g	0.3	1.07
2662078	BH3A-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Benzo(b)fluoranthene	µg/g	0.78	1.63
2662078	BH3A-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Fluoranthene	µg/g	0.69	2.28
2662078	BH3A-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.47

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING
AGAT WORK ORDER: 21T766741
PROJECT: BIGC-ENV-462D
ATTENTION TO: Eileen Liu
SAMPLING SITE:1074 Cooke
SAMPLED BY:TVH

Trace Organics Analysis

RPT Date: Jul 06, 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	2618820		<0.05	<0.05	NA	< 0.05	102%	50%	140%	79%	50%	140%	112%	50%	140%
Acenaphthylene	2618820		<0.05	<0.05	NA	< 0.05	113%	50%	140%	100%	50%	140%	77%	50%	140%
Acenaphthene	2618820		<0.05	<0.05	NA	< 0.05	113%	50%	140%	91%	50%	140%	73%	50%	140%
Fluorene	2618820		<0.05	<0.05	NA	< 0.05	118%	50%	140%	94%	50%	140%	100%	50%	140%
Phenanthrene	2618820		<0.05	<0.05	NA	< 0.05	98%	50%	140%	70%	50%	140%	79%	50%	140%
Anthracene	2618820		<0.05	<0.05	NA	< 0.05	117%	50%	140%	105%	50%	140%	106%	50%	140%
Fluoranthene	2618820		<0.05	<0.05	NA	< 0.05	78%	50%	140%	65%	50%	140%	90%	50%	140%
Pyrene	2618820		<0.05	<0.05	NA	< 0.05	70%	50%	140%	63%	50%	140%	89%	50%	140%
Benz(a)anthracene	2618820		<0.05	<0.05	NA	< 0.05	84%	50%	140%	83%	50%	140%	76%	50%	140%
Chrysene	2618820		<0.05	<0.05	NA	< 0.05	86%	50%	140%	76%	50%	140%	87%	50%	140%
Benzo(b)fluoranthene	2618820		<0.05	<0.05	NA	< 0.05	106%	50%	140%	89%	50%	140%	98%	50%	140%
Benzo(k)fluoranthene	2618820		<0.05	<0.05	NA	< 0.05	95%	50%	140%	81%	50%	140%	91%	50%	140%
Benzo(a)pyrene	2618820		<0.05	<0.05	NA	< 0.05	111%	50%	140%	70%	50%	140%	76%	50%	140%
Indeno(1,2,3-cd)pyrene	2618820		<0.05	<0.05	NA	< 0.05	74%	50%	140%	84%	50%	140%	69%	50%	140%
Dibenz(a,h)anthracene	2618820		<0.05	<0.05	NA	< 0.05	76%	50%	140%	92%	50%	140%	76%	50%	140%
Benzo(g,h,i)perylene	2618820		<0.05	<0.05	NA	< 0.05	92%	50%	140%	76%	50%	140%	58%	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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Results relate only to the items tested. Results apply to samples as received.

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

AGAT WORK ORDER: 21T766741

PROJECT: BIGC-ENV-462D

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

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
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5009	CCME Tier 1 Method	BALANCE

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AGAT Laboratories
5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
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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)

Report Information:

Company: BIG Consulting Inc
Contact: Eileen Liu
Address: 505 Consumers Road, Suite 804 Toronto, Ontario, Canada M2J 4Y8
Phone: 647-200-6433 Fax:
Reports to be sent to:
1. Email: eliu@brownfieldigi.com
2. Email:

Project Information:

Project: BIGC-ENV-462D
Site Location: 1074 Cooke
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: BIG Consulting Inc
Contact: Laine Dougherty
Address: 12-5500 Tomken Road Mississauga, Ontario L4W 2Z4, Canada
Email: ldougherty@brownfieldigi.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 (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

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 21T766741
Cooler Quantity: 1 med blue
Arrival Temperatures: 9.8 | 9.1 | 9.3
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Bagged Ice

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	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 ☐ 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)
BH3A-SS2	25/06/2021	2:20 PM	1	S							☑							
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Travis Van Holst	25/06/2021	6:55			
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 JUN 25 6:55PM

Page 1 of 1

N:

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

CLIENT NAME: B.I.G. CONSULTING
804-505 CONSUMERS ROAD
TORONTO, ON M2J 4V8

ATTENTION TO: Eileen Liu

PROJECT: BIGC-ENV-462D

AGAT WORK ORDER: 21T766743

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jul 06, 2021

PAGES (INCLUDING COVER): 5

VERSION*: 1

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*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
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- The test results reported herewith relate only to the samples as received by the laboratory.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 21T766743

PROJECT: BIGC-ENV-462D

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-06-25

DATE REPORTED: 2021-07-06

		SAMPLE DESCRIPTION:		BH3B-SS2
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2021-06-25 15:00
Parameter	Unit	G / S	RDL	2662080
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	0.15
Anthracene	µg/g	0.67	0.05	0.06
Fluoranthene	µg/g	0.69	0.05	0.33
Pyrene	µg/g	78	0.05	0.30
Benz(a)anthracene	µg/g	0.5	0.05	0.20
Chrysene	µg/g	7	0.05	0.18
Benzo(b)fluoranthene	µg/g	0.78	0.05	0.25
Benzo(k)fluoranthene	µg/g	0.78	0.05	0.09
Benzo(a)pyrene	µg/g	0.3	0.05	0.19
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	0.09
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	0.12
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05
Moisture Content	%		0.1	16.8
Surrogate	Unit	Acceptable Limits		
Naphthalene-d8	%	50-140		86
Acridine-d9	%	50-140		82
Terphenyl-d14	%	50-140		73

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

2662080 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 perfomed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING
AGAT WORK ORDER: 21T766743
PROJECT: BIGC-ENV-462D
ATTENTION TO: Eileen Liu
SAMPLING SITE:1074 Cooke
SAMPLED BY:TVH

Trace Organics Analysis

RPT Date: Jul 06, 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	2618820		<0.05	<0.05	NA	< 0.05	102%	50%	140%	79%	50%	140%	112%	50%	140%
Acenaphthylene	2618820		<0.05	<0.05	NA	< 0.05	113%	50%	140%	100%	50%	140%	77%	50%	140%
Acenaphthene	2618820		<0.05	<0.05	NA	< 0.05	113%	50%	140%	91%	50%	140%	73%	50%	140%
Fluorene	2618820		<0.05	<0.05	NA	< 0.05	118%	50%	140%	94%	50%	140%	100%	50%	140%
Phenanthrene	2618820		<0.05	<0.05	NA	< 0.05	98%	50%	140%	70%	50%	140%	79%	50%	140%
Anthracene	2618820		<0.05	<0.05	NA	< 0.05	117%	50%	140%	105%	50%	140%	106%	50%	140%
Fluoranthene	2618820		<0.05	<0.05	NA	< 0.05	78%	50%	140%	65%	50%	140%	90%	50%	140%
Pyrene	2618820		<0.05	<0.05	NA	< 0.05	70%	50%	140%	63%	50%	140%	89%	50%	140%
Benz(a)anthracene	2618820		<0.05	<0.05	NA	< 0.05	84%	50%	140%	83%	50%	140%	76%	50%	140%
Chrysene	2618820		<0.05	<0.05	NA	< 0.05	86%	50%	140%	76%	50%	140%	87%	50%	140%
Benzo(b)fluoranthene	2618820		<0.05	<0.05	NA	< 0.05	106%	50%	140%	89%	50%	140%	98%	50%	140%
Benzo(k)fluoranthene	2618820		<0.05	<0.05	NA	< 0.05	95%	50%	140%	81%	50%	140%	91%	50%	140%
Benzo(a)pyrene	2618820		<0.05	<0.05	NA	< 0.05	111%	50%	140%	70%	50%	140%	76%	50%	140%
Indeno(1,2,3-cd)pyrene	2618820		<0.05	<0.05	NA	< 0.05	74%	50%	140%	84%	50%	140%	69%	50%	140%
Dibenz(a,h)anthracene	2618820		<0.05	<0.05	NA	< 0.05	76%	50%	140%	92%	50%	140%	76%	50%	140%
Benzo(g,h,i)perylene	2618820		<0.05	<0.05	NA	< 0.05	92%	50%	140%	76%	50%	140%	58%	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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Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: B.I.G. CONSULTING

AGAT WORK ORDER: 21T766743

PROJECT: BIGC-ENV-462D

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

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
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5009	CCME Tier 1 Method	BALANCE

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories
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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: BIG Consulting Inc
Contact: Eileen Liu
Address: 505 Consumers Road, Suite 804 Toronto, Ontario, Canada M2J 4Z
Phone: 647-200-6433 Fax:
Reports to be sent to:
1. Email: eliu@brownfieldigi.com
2. Email:

Project Information:

Project: BIGC-ENV-462D
Site Location: 1074 Cooke
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: BIG Consulting Inc
Contact: Laine Dougherty
Address: 12-5500 Tomken Road Mississauga, Ontario L4W 2Z4, Canada
Email: ldougherty@brownfieldigi.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 (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

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 21T766743
Cooler Quantity: 1 med blue
Arrival Temperatures: 9.8 | 9.1 | 9.3
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Bagged Ice

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

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: PCBs	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 ☐ 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)
BH3B-SS2	25/06/2021	3:00 AM PM	1	S						☑							
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Travis Van Holst	25/06/2021	6:55	Hoshi D		
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

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

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CLIENT NAME: B.I.G. CONSULTING
804-505 CONSUMERS ROAD
TORONTO, ON M2J 4V8

ATTENTION TO: Eileen Liu

PROJECT: BIGC-ENV-462D

AGAT WORK ORDER: 21T766744

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jul 06, 2021

PAGES (INCLUDING COVER): 6

VERSION*: 1

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*Notes

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Certificate of Analysis

AGAT WORK ORDER: 21T766744

PROJECT: BIGC-ENV-462D

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

SAMPLED BY:TVH

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

DATE RECEIVED: 2021-06-25

DATE REPORTED: 2021-07-06

		SAMPLE DESCRIPTION:		BH3C-SS2
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2021-06-25 13:55
Parameter	Unit	G / S	RDL	2662083
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	0.11
Fluorene	µg/g	62	0.05	0.08
Phenanthrene	µg/g	6.2	0.05	0.08
Anthracene	µg/g	0.67	0.05	0.27
Fluoranthene	µg/g	0.69	0.05	1.33
Pyrene	µg/g	78	0.05	1.16
Benz(a)anthracene	µg/g	0.5	0.05	1.14
Chrysene	µg/g	7	0.05	1.04
Benzo(b)fluoranthene	µg/g	0.78	0.05	1.56
Benzo(k)fluoranthene	µg/g	0.78	0.05	0.64
Benzo(a)pyrene	µg/g	0.3	0.05	1.35
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	0.58
Benzo(g,h,i)perylene	µg/g	6.6	0.05	0.54
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05
Moisture Content	%		0.1	21.7
Surrogate	Unit	Acceptable Limits		
Naphthalene-d8	%	50-140		110
Acridine-d9	%	50-140		78
Terphenyl-d14	%	50-140		100

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

2662083 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 perfomed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

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Exceedance Summary

AGAT WORK ORDER: 21T766744

PROJECT: BIGC-ENV-462D

CLIENT NAME: B.I.G. CONSULTING

ATTENTION TO: Eileen Liu

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
2662083	BH3C-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Benz(a)anthracene	µg/g	0.5	1.14
2662083	BH3C-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Benzo(a)pyrene	µg/g	0.3	1.35
2662083	BH3C-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Benzo(b)fluoranthene	µg/g	0.78	1.56
2662083	BH3C-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Dibenz(a,h)anthracene	µg/g	0.1	0.58
2662083	BH3C-SS2	ON T3 S RPI CT	O. Reg. 153(511) - PAHs (Soil)	Fluoranthene	µg/g	0.69	1.33

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING

AGAT WORK ORDER: 21T766744

PROJECT: BIGC-ENV-462D

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

SAMPLED BY:TVH

Trace Organics Analysis

RPT Date: Jul 06, 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	2618820		<0.05	<0.05	NA	< 0.05	102%	50%	140%	79%	50%	140%	112%	50%	140%
Acenaphthylene	2618820		<0.05	<0.05	NA	< 0.05	113%	50%	140%	100%	50%	140%	77%	50%	140%
Acenaphthene	2618820		<0.05	<0.05	NA	< 0.05	113%	50%	140%	91%	50%	140%	73%	50%	140%
Fluorene	2618820		<0.05	<0.05	NA	< 0.05	118%	50%	140%	94%	50%	140%	100%	50%	140%
Phenanthrene	2618820		<0.05	<0.05	NA	< 0.05	98%	50%	140%	70%	50%	140%	79%	50%	140%
Anthracene	2618820		<0.05	<0.05	NA	< 0.05	117%	50%	140%	105%	50%	140%	106%	50%	140%
Fluoranthene	2618820		<0.05	<0.05	NA	< 0.05	78%	50%	140%	65%	50%	140%	90%	50%	140%
Pyrene	2618820		<0.05	<0.05	NA	< 0.05	70%	50%	140%	63%	50%	140%	89%	50%	140%
Benz(a)anthracene	2618820		<0.05	<0.05	NA	< 0.05	84%	50%	140%	83%	50%	140%	76%	50%	140%
Chrysene	2618820		<0.05	<0.05	NA	< 0.05	86%	50%	140%	76%	50%	140%	87%	50%	140%
Benzo(b)fluoranthene	2618820		<0.05	<0.05	NA	< 0.05	106%	50%	140%	89%	50%	140%	98%	50%	140%
Benzo(k)fluoranthene	2618820		<0.05	<0.05	NA	< 0.05	95%	50%	140%	81%	50%	140%	91%	50%	140%
Benzo(a)pyrene	2618820		<0.05	<0.05	NA	< 0.05	111%	50%	140%	70%	50%	140%	76%	50%	140%
Indeno(1,2,3-cd)pyrene	2618820		<0.05	<0.05	NA	< 0.05	74%	50%	140%	84%	50%	140%	69%	50%	140%
Dibenz(a,h)anthracene	2618820		<0.05	<0.05	NA	< 0.05	76%	50%	140%	92%	50%	140%	76%	50%	140%
Benzo(g,h,i)perylene	2618820		<0.05	<0.05	NA	< 0.05	92%	50%	140%	76%	50%	140%	58%	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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Results relate only to the items tested. Results apply to samples as received.

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

Method Summary

CLIENT NAME: B.I.G. CONSULTING

AGAT WORK ORDER: 21T766744

PROJECT: BIGC-ENV-462D

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 Cooke

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
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5009	CCME Tier 1 Method	BALANCE

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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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: BIG Consulting Inc
Contact: Eileen Liu
Address: 505 Consumers Road, Suite 804 Toronto, Ontario, Canada M2J 4Y
Phone: 647-200-6433 Fax:
Reports to be sent to:
1. Email: eliu@brownfieldigi.com
2. Email:

Project Information:

Project: BIGC-ENV-462D
Site Location: 1074 Cooke
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: BIG Consulting Inc
Contact: Laine Dougherty
Address: 12-5500 Tomken Road Mississauga, Ontario L4W 2Z4, Canada
Email: ldougherty@brownfieldigi.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 *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

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 21T766744
Cooler Quantity: 1 med blue
Arrival Temperatures: 9.8 | 9.1 | 9.3
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Bagged Ice

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

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: PCBs	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)
BH3C-SS2	25/06/2021	1:55 AM PM	1	S						☑							
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Travis Van Holst	25/06/2021	6:55pm	Hacle D		
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

N°:

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

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CANADA L4Z 1Y2
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http://www.agatlabs.com

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

ATTENTION TO: Eileen Liu

PROJECT: BIGC-ENV-462D

AGAT WORK ORDER: 21T768030

WATER ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

DATE REPORTED: Jul 07, 2021

PAGES (INCLUDING COVER): 6

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T768030

PROJECT: BIGC-ENV-462D

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 and 1062 Cooke Boulevard, Burlington

SAMPLED BY:SL

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

DATE RECEIVED: 2021-06-29

DATE REPORTED: 2021-07-07

		SAMPLE DESCRIPTION:		MW7
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2021-06-29 15:00
Parameter	Unit	G / S	RDL	2676936
Dissolved Antimony	µg/L	20000	1.0	<1.0
Dissolved Arsenic	µg/L	1900	1.0	<1.0
Dissolved Barium	µg/L	29000	2.0	49.8
Dissolved Beryllium	µg/L	67	0.50	<0.50
Dissolved Boron	µg/L	45000	10.0	146
Dissolved Cadmium	µg/L	2.7	0.20	<0.20
Dissolved Chromium	µg/L	810	2.0	<2.0
Dissolved Cobalt	µg/L	66	0.50	<0.50
Dissolved Copper	µg/L	87	1.0	3.1
Dissolved Lead	µg/L	25	0.50	<0.50
Dissolved Molybdenum	µg/L	9200	0.50	1.04
Dissolved Nickel	µg/L	490	3.0	5.9
Dissolved Selenium	µg/L	63	1.0	<1.0
Dissolved Silver	µg/L	1.5	0.20	<0.20
Dissolved Thallium	µg/L	510	0.30	<0.30
Dissolved Uranium	µg/L	420	0.50	0.80
Dissolved Vanadium	µg/L	250	0.40	<0.40
Dissolved Zinc	µg/L	1100	5.0	<5.0
Mercury	µg/L	0.29	0.02	<0.02
Chromium VI	µg/L	140	2	<2
Cyanide, Free	µg/L	66	2	<2
Dissolved Sodium	µg/L	2300000	250	223000
Chloride	µg/L	2300000	100	458000
Electrical Conductivity	uS/cm	NA	2	2280
pH	pH Units		NA	7.88

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 21T768030

PROJECT: BIGC-ENV-462D

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 and 1062 Cooke Boulevard, Burlington

SAMPLED BY:SL

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

DATE RECEIVED: 2021-06-29

DATE REPORTED: 2021-07-07

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - 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.

2676936 Metals analysis completed on a filtered sample.
Dilution required, RDL has been increased accordingly.

Analysis perfomed at AGAT Toronto (unless marked by *)

Certified By:



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Quality Assurance

CLIENT NAME: B.I.G. CONSULTING INC.
AGAT WORK ORDER: 21T768030
PROJECT: BIGC-ENV-462D
ATTENTION TO: Eileen Liu
SAMPLING SITE:1074 and 1062 Cooke Boulevard, Burlington
SAMPLED BY:SL

Water Analysis

RPT Date: Jul 07, 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	2676024		<1.0	<1.0	NA	< 1.0	99%	70%	130%	99%	80%	120%	98%	70%	130%
Dissolved Arsenic	2676024		<1.0	<1.0	NA	< 1.0	92%	70%	130%	105%	80%	120%	100%	70%	130%
Dissolved Barium	2676024		76.7	79.4	3.5%	< 2.0	93%	70%	130%	95%	80%	120%	90%	70%	130%
Dissolved Beryllium	2676024		<0.50	<0.50	NA	< 0.50	103%	70%	130%	110%	80%	120%	104%	70%	130%
Dissolved Boron	2676024		117	128	9.0%	< 10.0	111%	70%	130%	118%	80%	120%	101%	70%	130%
Dissolved Cadmium	2676024		<0.20	<0.20	NA	< 0.20	100%	70%	130%	107%	80%	120%	104%	70%	130%
Dissolved Chromium	2676024		<2.0	<2.0	NA	< 2.0	102%	70%	130%	104%	80%	120%	96%	70%	130%
Dissolved Cobalt	2676024		<0.50	<0.50	NA	< 0.50	102%	70%	130%	105%	80%	120%	95%	70%	130%
Dissolved Copper	2676024		1.3	1.6	NA	< 1.0	100%	70%	130%	106%	80%	120%	98%	70%	130%
Dissolved Lead	2676024		<0.50	<0.50	NA	< 0.50	98%	70%	130%	100%	80%	120%	96%	70%	130%
Dissolved Molybdenum	2676024		20.7	19.2	7.5%	< 0.50	102%	70%	130%	108%	80%	120%	98%	70%	130%
Dissolved Nickel	2676024		<3.0	<3.0	NA	< 3.0	101%	70%	130%	104%	80%	120%	95%	70%	130%
Dissolved Selenium	2676024		<1.0	1.9	NA	< 1.0	99%	70%	130%	106%	80%	120%	112%	70%	130%
Dissolved Silver	2676024		<0.20	<0.20	NA	< 0.20	99%	70%	130%	104%	80%	120%	96%	70%	130%
Dissolved Thallium	2676024		<0.30	<0.30	NA	< 0.30	95%	70%	130%	104%	80%	120%	100%	70%	130%
Dissolved Uranium	2676024		3.42	3.48	1.7%	< 0.50	102%	70%	130%	107%	80%	120%	102%	70%	130%
Dissolved Vanadium	2676024		<0.40	0.81	NA	< 0.40	101%	70%	130%	110%	80%	120%	97%	70%	130%
Dissolved Zinc	2676024		<5.0	<5.0	NA	< 5.0	106%	70%	130%	105%	80%	120%	102%	70%	130%
Mercury	2675567		<0.02	<0.02	NA	< 0.02	103%	70%	130%	101%	80%	120%	100%	70%	130%
Chromium VI	2687790		<2	<2	NA	< 2	100%	70%	130%	108%	80%	120%	103%	70%	130%
Cyanide, Free	2683152		<2	<2	NA	< 2	102%	70%	130%	103%	80%	120%	118%	70%	130%
Dissolved Sodium	2676024		86500	90600	4.6%	< 50	98%	70%	130%	96%	80%	120%	95%	70%	130%
Chloride	2683260		108000	104000	3.8%	< 100	90%	70%	130%	100%	80%	120%	106%	70%	130%
Electrical Conductivity	2683610		349	342	2.0%	< 2	109%	90%	110%	NA			NA		
pH	2683610		7.57	7.81	3.1%	NA	99%	90%	110%	NA			NA		

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

Certified By:



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Results relate only to the items tested. Results apply to samples as received.

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

Method Summary

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

AGAT WORK ORDER: 21T768030

PROJECT: BIGC-ENV-462D

ATTENTION TO: Eileen Liu

SAMPLING SITE:1074 and 1062 Cooke Boulevard, Burlington

SAMPLED BY:SL

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	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

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

1 Sm Blue

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

Chain of Custody Record

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

Laboratory Use Only
Work Order #: 21T768030
Cooler Quantity:
Arrival Temperatures: 24.7 24.8 31.0
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes: Ice-pack

Report Information:
Company: B.I.G. Consulting
Contact: Eileen Liu
Address: 12-5500 Tomken Road
Mississauga, ON L4W 2Z4
Phone: 905-782-0315 Fax:
Reports to be sent to:
1. Email: eliu@brownfieldigi.com
2. Email:

Regulatory Requirements:
(Please check all applicable boxes)
☑ Regulation 153/04 — Table 3 (Indicate One) — ☐ Ind/Com ☑ Res/Park ☐ Agriculture — Soil Texture (Check One) ☑ Coarse ☐ Fine
☐ Excess Soils R406 — Table (Indicate One) — Sample from APEC? ☐ Yes ☐ No — ☐ Stockpile ☐ In-situ
☐ Regulation 558
☐ Sewer Use ☐ Sanitary ☐ Storm — Region ☐ 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-462D
Site Location: 1074 and 1062 Cooke Boulevard, Burlington.
Sampled By: SC
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:
Bill To Same: Yes ☐ No ☐
Company:
Contact:
Address:
Email: LDougherty@brownfieldigi.com; NKepics@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, DOC (Y/N)	O. Reg 153: Metals & Inorganics, inc. EC/SAR	Metals - ICPMS, ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs Analyze F4G if required ☐ Yes ☐ No	PAHs	PCBs	VOC	Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
~~MW4~~ MW7	21/06/29	1500 AM/PM	6	GW		Y	✓										N
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

FRI JUN 25 4:5 PM

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Shirley Li SL	21/06/29	1600	JIMRAN JR		
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

N°:

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: Eileen Liu
PROJECT: BIGC-ENV-462D
AGAT WORK ORDER: 21T770672
SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer
DATE REPORTED: Jul 07, 2021
PAGES (INCLUDING COVER): 6
VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.

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: 21T770672

PROJECT: BIGC-ENV-462D

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

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke Blvd

SAMPLED BY:KK

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

DATE RECEIVED: 2021-07-06

DATE REPORTED: 2021-07-07

				SAMPLE DESCRIPTION:	BH2B-SS6
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-07-06 16:30
Parameter	Unit	G / S	RDL	2701569	
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	11.6	

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

2701569 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis perfomed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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http://www.agatlabs.com

Exceedance Summary

AGAT WORK ORDER: 21T770672

PROJECT: BIGC-ENV-462D

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

ATTENTION TO: Eileen Liu

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
2701569	BH2B-SS6	ON T3 S RPI CT	O. Reg. 153(511) - ORPs (Soil)	pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	11.6

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Quality Assurance

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

AGAT WORK ORDER: 21T770672

PROJECT: BIGC-ENV-462D

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke Blvd

SAMPLED BY:KK

Soil Analysis

RPT Date: Jul 07, 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) - ORPs (Soil)															
pH, 2:1 CaCl2 Extraction	2701569	2701569	11.6	11.5	0.9%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

Certified By:



AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

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MISSISSAUGA, ONTARIO
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TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Method Summary

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

AGAT WORK ORDER: 21T770672

PROJECT: BIGC-ENV-462D

ATTENTION TO: Eileen Liu

SAMPLING SITE:Cooke Blvd

SAMPLED BY:KK

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

Results relate only to the items tested. Results apply to samples as received.

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: BIG Consulting Inc.
Contact: Eileen Liu
Address: Unit 12-5500 Tomken Rd, Mississauga, Ontario
Phone: 647-200-6433 Fax:
Reports to be sent to:
1. Email: eliu@brownfieldigi.com
2. Email:

Project Information:

Project: BIGC-ENV-462D
Site Location: Cooke Blvd
Sampled By: KK
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:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 (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

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 21T770672
Cooler Quantity: 1 Bag (Bags of ice)
Arrival Temperatures: 4.6
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

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 Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - CrVI, Hg, HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: 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)
BH2B-SS6	Jul 6 '2021	4:30 AM/PM	1	Soil												✓	✓	DH	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	

	Date	Time		Date	Time
Samples Relinquished By (Print Name and Sign):			Samples Received By (Print Name and Sign): Neil Ramnarain		
Samples Relinquished By (Print Name and Sign):			Samples Received By (Print Name and Sign):		
Samples Relinquished By (Print Name and Sign):			Samples Received By (Print Name and Sign):		

21 JUL 6 6:16pm

Page ____ of ____

No: T 118800

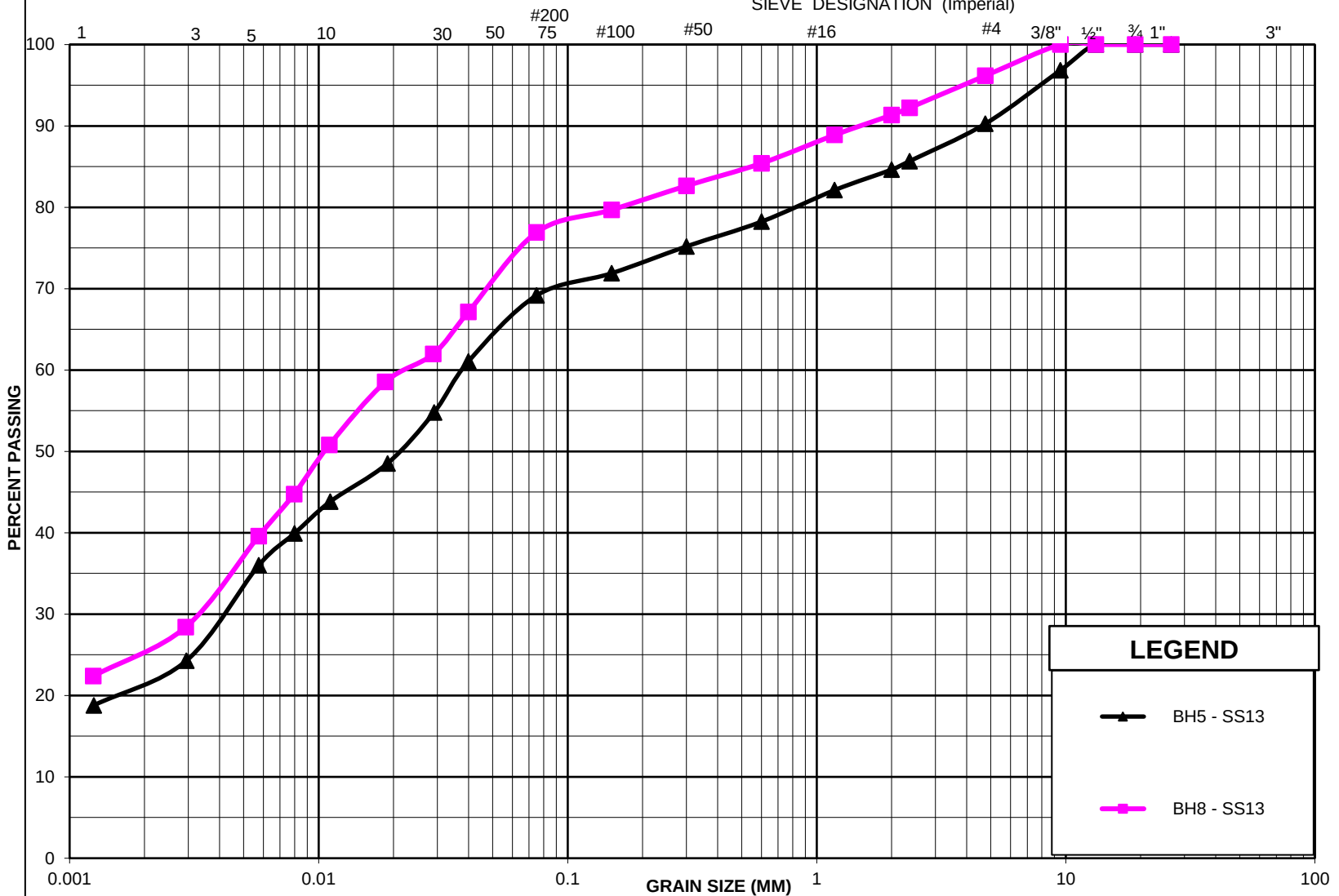
Appendix F – Grain Size Analysis

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse

GRAIN SIZE IN MICROMETERS

SIEVE DESIGNATION (Imperial)



B.I.G. CONSULTING INC.

PARTICLE SIZE ANALYSIS (Hydrometer)

CLAYEY SILT TILL, some Sand, some Gravel

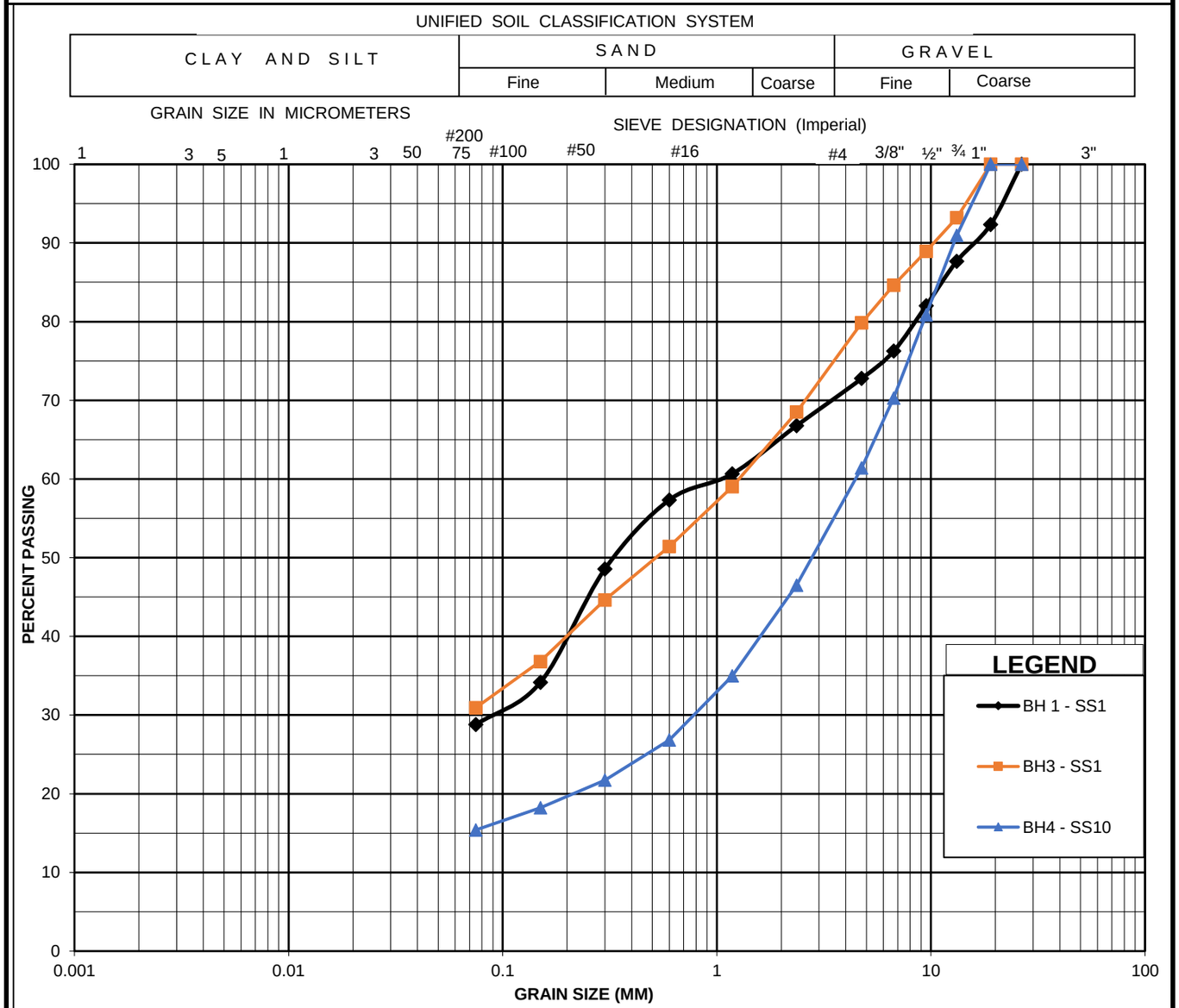
FIGURE No. 1

Project No.: BIGC-ENV-457A

DATE : 06/15/2021

PARTICLE - SIZE DISTRIBUTION OF SOILS

ASTM D6913



B.I.G. CONSULTING INC.

PARTICLE SIZE ANALYSIS (Sieve)

Gravelly Sand, Trace to Some Silt

FIGURE No. 2

Project No.: BIGC-ENV-462A

DATE : 21/06/2021